

Iuav University of Venice
School of Doctorate Studies

PhD in Design Sciences
XXVIII cycle, a.a. 2015-2016

Extending Horizons: The Praxis of Experimental Publishing in the Age of Digital Networks

Design, Art, and the Materialities of Mediation



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Index

Acknowledgements	XI
Introduction	1
1. The Future of the Book and the Present of Publishing	9
1.1. The 'Decentered' Book and the Debate Around It	9
1.2. From The Future of the Book to the Present of Publishing	17
1.2.1. <i>Publishing, Publication, Publisher, Public</i> — A Terminological Exploration	17
1.2.2. Communication Circuits	20
1.2.3. Everyone is a Publisher: Publishing as a Function and as a Default Activity	24
1.2.4. From Publishing to Publication: Producing a Public	24
1.2.5. The Role of Publishing: From Gatekeeping to Filtering	26
1.3. A Theory of Mediation: Content, Models, Filtering, Frames, and Amplification	27
1.4. Digital, Digitization, and Digitalization	31
1.4.1. Digital as Discreet Encoding, as a 'Way of Being', as Hegemony	31
1.4.2. Digitization and Digitalization of Publishing: Some Significant Episodes	32
2. Experimental Publishing and Its Trading Zones	43
2.1. Influential Perspectives and Communities of Practice	43
2.2. Influential Perspectives	44
2.2.1. Intermedia, Remediation, Reversed Remediation, Intermediation — Respect and Rivalry between Media	44
2.2.2. Media-Specific Analysis, Technotexts, and Performative Materiality — Processes Instead of Objects	47
2.2.3. Post-digital — Beyond Digitality as an Ideology	49
2.3. Communities of Practice	51
2.3.1. Artists' Books — Material Self-Reflexivity	51
2.3. 2. E-Literature — The Electronic Text and Its Multiple Manifestations	53
2.3. 3. Digital Humanities — Being <i>Inside</i> the Technology	55
2.3. 4. Critical Making — Technology as a 'Matter of Concern'	57
2.4. Experimental Publishing — Practical Meditations on Mediation	60
3. The Praxis of Experimental Publishing: Thematic Case Studies	69
3.1. Structure and Selection Criteria	69
3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means	70
3.3. Production of Artifacts — Print on Demand: The Radical Potential of Networked Standardization	85
3.4. Distribution — Performing Publishing: Fragmentation, Networks and Circulation	97
3.5. Reception — Questioning Controlled Consumption: Responses to Tracking, Control, and Access	110
3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content	121

4. Publishing Experimental Publishing	139
4.1. A Constellation of Online Archives	139
4.1.1. UbuWeb	139
4.1.2. Rhizome Artbase	142
4.1.3. Artists' Books Online	146
4.2. The Post-Digital Publishing Archive: An Inventory of Speculative Strategies	147
4.2.1. The Evolution of an Online Archive	147
4.2.2. Curatorial Practice, Inclusion Criteria, and Periodization	148
4.2.3. Categorization and Metadata as Interpretative Devices	149
4.2.4. Infrastructure, Interface, and Navigation	149
4.2.5. A 'Generative' Archive	161
Conclusions	155
Bibliography	159
Appendices	176
A.1. Post-Digital Publishing Archive — Abstract	176
A.2. Critical Publishing — Design as a Tool to Investigate Current Publishing Ecosystems	182
A.3. Print on Demand — The Radical Potential of Networked Standardization	186
A.4. What We Talk About When We Talk About Publishing	191
A.5. Digital Publishing — In Defense of Poor Media	196

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Introduction

Let us suppose that literature begins at the moment when literature becomes a question (Blanchot 1995, 300).

This dissertation is focused on the practices of experimental publishing that are intertwined with digital and networked technology, and borrow strategies derived from the context of arts and design. In order to build a model of interpretation of such practices, I defined a theoretical framework, I made an overview of influential perspectives within the field, and I carried out an investigation of the ‘communities of practice’ in which experimental publishing takes place. Then, I analyzed a phenomenology of projects that highlight the characteristics of an experimental approach in each specific stage of the publishing process. Finally, I developed an online archive for the purpose of categorizing and connecting the different case studies. The main question addressed is:

How does experimental publishing contribute to influence and extend the very notion of publishing, understood as an activity that transcends a specific professional sector by involving a substantial portion of Web users?

To answer this question, I compare a series of diverse definitions of publishing, I discuss the complexities of such field and I advance a perspective to orient within it and to identify its boundaries. This perspective is characterized by a ‘holistic’ understanding of publishing — not a specific moment, but a succession of phases — and by a focus on processes instead of products. Then, I consider dynamics of both digitization and digitalization, and the effects that these have on publishing tools. In order to do so, I describe a series of episodes that have illustrative value for the understanding this impact. At this stage, I define the attribute ‘experimental’ by referring to artistic and literary avant-gardes, and to the universe of the artists’ books, including also a series of manifestos produced by designers and artists who work in the field of publishing.

In order to pinpoint experimental modes of production, dissemination and reception, I build and analyze a thematic set of case studies. I look at these by using as a model the series of phases extracted from the initial analysis of the publishing process: production of content, production of artifacts, distribution, reception, and survival. Each of these case studies is meant to bring out the transformations that an experimental practice can produce on each specific phase of the process. Finally, I concentrate on the practical outcome of the dissertation, which can be assimilated to different phases in the model, in particular that of survival. Here, I describe the development of an online repository of experimental publishing and the choices related to the inclusion and the categorization of the projects covered in the thematic case studies. Then, I introduce a periodization and a series of inclusion criteria that guide the activities of archiving. I conclude by discussing the aspects of publishing that are extended

or altered by the practices described in the case studies. In this way, I close a circular path of definitions that are related through a feedback mechanism. In this path, defining publishing helps to frame experimental practices, which in turns affect the notion of publishing defined in first place. In this research, digital and networked technology plays a multiple role: it is a core agent in the mutations in the editorial practice; it produces conditions that are able to foster or hinder a set of values and consequent behaviors that are not always easily intelligible. In this sense, it is appropriate to speak of the reciprocal influence of society and *digitality*¹.

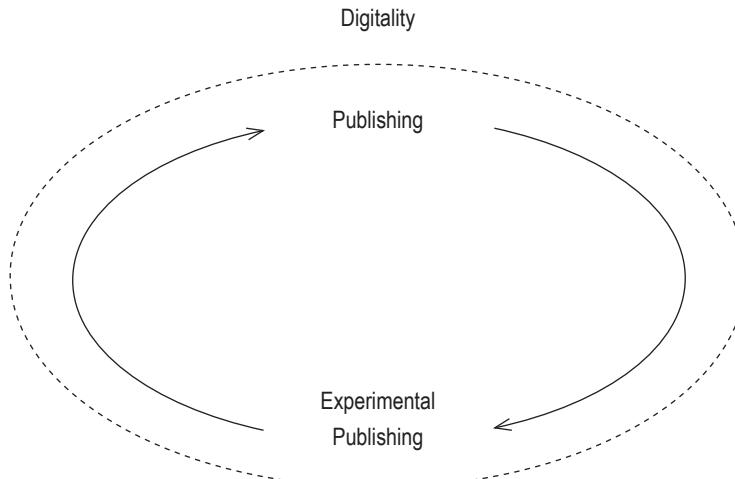


Fig. 1: Circular path of the research.

A phenomenology of experimental publishing, the core of the research, is developed by selecting, discussing, and comparing a series artifacts, practices, services, and platforms conceived by artists and designers. These projects function as *meditations on mediation*: the process to build and activate them, their role, behavior, and symbolic value operate as tools to reflect upon the ways in which several layers of mediation — *frames* in Michael Bhaskar terms (2013) — affect the production, distribution, and reception of content; in a word: publishing. In building this phenomenology, I avoid showcase projects, “the achilles heel of all electronic and multimedia publishing efforts” (Cramer 2014) by which I mean artifacts or services subservient to the technologies employed. An exception to this rule occurs when a showcase projects is useful to highlight, by opposition, features that belong to other ones. A collateral result of such phenomenology is to point out the ways in which the publishing ecosystem is *designed*. Therefore, the projects I consider do not directly provide solutions because they often address “wicked problems” (Rittel and Webber 1973): societal issues that hold a level of ambiguity and do not allow for straightforward answers.

The applied methodology takes advantage of multiple disciplines: I look at book history in order to find and compare models that describe the lifecycle of a published work; media

¹ The notion of *digitality*, employed by Jean Baudrillard (1983, 103), indicates the opaque governing principle of the current “universe of structures and oppositions”. Somehow more concretely and optimistically, Negroponte (1995) popularized the idea of digitality as the condition of “being digital” by exploring the differences between bits and atoms and their implications.

studies provide the tools to interpret digital and networked technology in relation to the production and circulation of text; artists' books, critical making, electronic literature, and digital humanities erode the boundaries between theory and practice. Furthermore, practice-based research, understood here as the organization of the source materials through an online platform, provides insights to the way categorization systems can be a critical device to interpret the works. Therefore, the adopted theoretical framework and the discussed phenomenology are part of the same loop: while theory fuels the production of experimental projects, the latter represent the ground to strengthen or invalidate theories and therefore to extend them.

The first chapter is devoted to the definition of the field of study. In the first place, I frame the debate around the so-called 'future of the book', an actual battlefield on which divergent views collide. The analysis of this debate is meant to highlight its ideological character and the series of dichotomies that it has produced. These dichotomies — for example the antagonism between the printed book and the electronic book — indirectly deny the technological nature of the 'traditional' book and are characterized by a linear and mono-directional idea of progress that often coincides to an enthusiasm for the new devices that become available on the market. The analysis is carried out mainly on two collections of essays derived respectively from the academic universe and the professional one: *The Future of the Book*, edited by Geoffrey Nunberg and *Book: A Futurist's Manifesto* edited by Hugh McGuire and Brian O'Leary. In this section, I point out as well the ways in which the paper book is now a 'decentered' medium, since it no longer represents the central artifact of the production and dissemination of knowledge. Therefore, I describe a renewed context in which the book functions as a service rather than a product. I conclude by arguing the need for a framework that is not based on the specificities of a single medium or device, but instead a framework that, while is in dialogue with the history of the printed book, broadens its horizons by focusing on the praxis of publishing. To this end, I explore various interpretations of the publishing process, resulting mainly from the studies of the history of the book, looking for a model that can be applied independently to a number of media that can be both on paper and electronic.

First, I address the notion of publishing itself, exploring the etymology of the term and the related ones. Then, I discuss a series of publishing models. Among them, Thomas R. Adams' and Nicolas Barker's one seems particularly useful since it does not focus on a specific artifact but, on the contrary, it describes a series of phases: publication, manufacture, distribution, reception, and survival. However, this model has a limit highlighted by Rachel Malik, which is to consider the act of publishing a specific moment. Conversely, Malik (2008) speaks of "horizons of publishable", a concept that is useful to emphasize the forces of mediation that come up at every stage of the process. Then, I look at a series of models of interpretation applied to publishing that derive from the field of book history. I proceed by examining the Web 2.0 notion according to which "everyone is a publisher" and the responses that it triggered. A specific section is dedicated to the publishing model proposed by Michael Bhaskar (2013). This is followed by an analysis of the effects — both direct and indirect — of the digitization and digitalization of publishing, in the form of a brief chronology of significant junctures. My model of publishing consists of five phases: production of content, production of artifacts, distribution, reception, and survival. It takes particular account of the mediating forces present at each stage and it can be regardless applied to practices involving physical, electronic, or hybrid outputs.

The second chapter provides a framework for the phenomenology of case studies analyzed in the next chapter. In this regard, I describe a number of influential perspectives that guide the practice of experimental publishing.

The first perspective concerns the relationships and influences between different media, through the concepts of intermedia, remediation, reversed remediation, and intermediation. Their hybridization shows how their mutual relations, generally accepted as absolute, are “socially produced and historically contingent” (Striphias 2011, 15). This allows to develop alternative narratives in which a medium acquires value within specific contexts. The debate around the term ‘post-digital’ is the second influential perspective. Here, the prefix ‘post’ has no temporal meaning but instead it indicates a phase of “digitality in crisis” characterized by the questioning of the specificity of new media, through the critical use of ‘traditional’ technologies such as the printed book. The third set of influential perspectives relates to the concept of materiality. Materiality, applicable both to paper and electronic artifacts, allows us to consider the way in which the material aspects of publications — layout, binding, printing method; but also the type of screen, code, and device — produce meaning, or rather suggest possible interpretations. Materiality is a ‘performative’ characteristic of the artifacts, as it is activated by the user/reader.

The following section is devoted to the discussion of the ‘communities of practice’ in which experimental approaches to publishing take place. The concept of communities of practice is particularly appropriate to identify fields in which design plays a crucial role but whose presence is subliminal. Within these contexts, the impact of design, while not necessarily explicit, is sometimes wider than in traditional publishing because it must meet the *processual* requirements of experimental publishing and, thus, it is not limited to the configuration of a single final artifact. The communities of practice examined here are: critical making, the field of artists’ books, electronic literature, and the digital humanities.

Critical making fosters a practical approach guided by the analysis of the socio-technical assumptions that characterize artifacts. Within critical making, ‘Do It Yourself’ is a way to understand the technical and social operations of devices and platforms. The eponymous zine, created by Garnet Hertz and distributed through the traditional mail system, is a direct connection with the practices of experimental publishing. The universe of the artists’ books is an area in which the production of books corresponds to the identification and subversion of their material or conceptual form. Artists’ books are therefore ‘self-conscious’ of their nature of physical medium, metaphor, and cultural symbol. Artists’ books emphasize the dynamics of mediation, sharpening or producing their own reading conditions. Electronic literature (e-lit) includes “works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer” (“What Is E-Lit?” 2013). Like artists’ books, e-lit works often reflect their own internal dynamics and the technologies that enable them. The point of view of electronic literature also shed light on the contemporary printing process, considered here a particular output of a mainly digital process rather than a medium in its own right. Finally, digital humanities is a ‘meta-discipline’ whose aim is to extend the methods of the classical humanities against the pervasiveness of digital networks. Digital humanities pays particular attention to design, which is considered an intellectual method in which “digital and physical making as inextricably and productively intertwined” (Burdick et al. 2012, preface).

I conclude the chapter by proposing a set of criteria that identify an experimental publishing practice, starting from the assumption that nowadays experimentation in the publishing industry is a necessity due to the hegemonic presence of the digital and to the current crisis of the sector. So, I describe a genuinely experimental practice that does not only focus on the possibilities offered by the single medium (because publishing often occurs simultaneously between multiple media) but focuses instead on the intersections and the specific mediations between various media and actively disputes the rhetoric argument according to which digital technology necessarily represents an evolution of paper and print.

A phenomenology of experimental publishing occupies the third chapter. I provide a collection of case studies, thematically bound together according to the model developed in the first chapter. For each of its phases, I describe and analyze a series of projects which suggest peculiar transformations that allow to reinterpret that very phase.

Within the first phase, devoted to the production of content, I focus on the forms of automatic and collaborative writing through annotations. I also look at the forms of reading that, being constantly tracked, eventually become forms of writing. In the scenario that emerges, writing is mediated to the point that the human input is inextricably combined with the non-human one. So, an awareness of the interpenetration between reading and writing becomes necessary, since they're both seamlessly linked to processes of distribution and marketing. In this regard, code can be seen as form of writing that involves the production of content on multiple levels, including the instructions through which content is configured.

Under the second phase, dedicated to the production of artifacts, I address *print on demand*, a system of production of paper books that allows any user to print even one copy of a book through online platforms. Then, I frame experiments with print on demand as a continuation and extension of the concept of *democratic multiple* which derives from the field of artists' books and I show the results of a hybrid publishing model where digital files and physical artifacts coexist and complement each other.

The distribution phase is dedicated to the performative aspects of the publishing practice. Here, I discuss the paradigm shift from the concept of edition to that of version and the influence of this on the relationship between form and content. The ability to modify a given content once it has been published means that distribution becomes somewhat independent circulation; a process, the latter, in which users can play an active role. The analyzed projects are therefore aimed at the implementation of strategies to 'activate' the end user in the circulation of the publication.

The fourth phase, dedicated to the reception by the public, is devoted to the critical answers to restrictions of access, control, and monitoring. The projects investigated here highlight the infrastructure of "controlled consumption" that hold the current ecosystem of publication (Striphias 2011, 180-2). The strategies employed are different: from the physical materialization of the limits produced by the systems meant to protect digital texts from digital piracy, to performances where the data generally obtained by companies without the user's knowledge are freely given away. The main value of these projects lies in the fact that they were able to create debate and awareness through the development of prototypes.

The last phase, that of survival, is dedicated to the re-publication of digital books and the recontextualization of content. In this section, I describe a number of projects and initiatives that aim to redefine the concept of the public library in the digital realm. Then, I look at projects that reflect on the activity of scanning and digitization of printed books and its political value in the face of massive digitization initiatives such as Google's one. Finally, I analyze practices of recontextualization and remix of existing materials favored by the presence of the public domain and Creative Commons licenses.

In the fourth and final chapter I retrace the ways in which the research itself was published and made available while in development. First, I analyze three online archives: UbuWeb, the Rhizome Artbase, and Artists' Books Online. For each one I make an overview of their evolution, the ways in which they are maintained, the values and the goals that drives them, the curatorial choices, the classification methods, and the technical aspects related to the platform employed, the navigation, and the interface.

Then, I discuss the Post-Digital Publishing Archive (P—DPA), the platform I've built to archive and categorize the various projects that form the thematic case studies. P—DPA is at the same time an instrument of the research and a practical output of the different phases of my publishing model, especially survival, since the archive recontextualizes and sheds new light on concluded projects. Here, I focus on the system of categorization employed and the choices in terms of interface and design. I propose a periodization in which I establish a primary focus from 2004, year of the first diffusion of the Web 2.0, to the present, in order to identify the coexistence of the most relevant technologies that contributed to the digitalization of publishing. However, I do not exclude previous periods so that a specific innovation, like for instance Desktop Publishing, can be seen independently from the others. I go on by explaining the inclusion criteria, describing three phases of progression of an artifact or service: anticipation, consolidation, comment or critique. The categorization model I employ introduces some innovative elements: it does not just list the medium, here understood as a physical support, as the main category for art and design projects; on the contrary it also includes the technologies used in the development of the project and in the possible recreation of additional instances. There are also categories such as the platforms — including Google Books, Amazon, Lulu — since the single project depends on them actively. These platforms are the main forces of socio-technical mediation to which the projects relate. Finally, I highlight the 'generative' aspect of the archive, which, besides containing information about projects, suggests new ones through the critical framework that distinguishes it.

In conclusion, I go back to the initial question and describe the way in which the previous case studies affect the very notion of publishing. The resulting definition is broader, anti-dichotomous, and 'holistic' since each phase is related to the others, partly conditioning them. Within the resulting practice of publishing, print is not in absolute opposition to digital, the boundaries between reading and writing are blurred as those between the one who publishes and the one who receives the publication. Finally, emphasizing the frequent origin of the discussed projects within educational institutions that combine art and design within a community of practice, I discuss the crucial role they play in order to encourage a practice of publishing that is genuinely experimental. In this respect, I introduce the concept of *poor media* as an alternative to an 'ornamental' use of digital technology that would lead the communities of practice found in educational institutions to acquire a socio-technical awareness of the publishing

tools. Art and design institutions would act as *protected spaces* in which it would possible to investigate the ecosystem of publishing through practical work but without the urgency of making competitive products.

The dissertation includes a series of appendices related to the various articles, essays, and workshops developed during the research period. Among these, there is an abstract of the archive online, used to disseminate the project and discuss it in different contexts; an article in the journal *Diid - Disegno Industriale, Industrial Design* in which I describe the critical capability of digital publishing models in the field of open design; an essay published on *Code-X*, edited by Danny Aldred and Emmanuelle Waeckerlé, where I claim the radical potential of networked standardization of print on demand technologies; an introductory article included in issue 28 of the magazine *Progetto Grafico* dedicated to publishing that I co-edited with Maria Rosaria Digregorio, Silvia Sfliotti, and Stefano Vittori; the essay “In Defense of Poor Media” published on the *Printed Web 3*, edited by Paul Souellis, in which I introduce the concept of *poor media*.

1. The Future of the Book and the Present of Publishing

1.1. The 'Decentered' Book and the Debate Around It

[...] the utility and significance of the form of the book doesn't begin and end with the printed page (Nunberg 1996, 16).

Discussing with Umberto Eco and Jean Philippe de Tonnac, Jean-Claude Carrière reports the activity of the Comitato d'azione studenti-scrittori in France during the 1968 movements (Eco and Carrière 2011, 214). This group, comprising the writer Maurice Blanchot, militated against traditional education and advocated for the disappearance of the book, considered as a prison for thought and knowledge. It seems that, at the time, the group didn't have a substitute to host knowledge while liberating it. A few decades later, knowledge could actually escape the printed book and find new containers. The prescient argument against the physical book as cage anticipated some of the perspectives that were later influenced by the advent of digital technology.

In this section, I investigate some understandings of the book that derive from the debate around its future. In particular, I compare the positions of theorists and historians with the ones of technologists and professionals in the publishing field. Then, I discuss the biases and opportunities around the possibility of transforming the practice of publishing. As Janneke Adema (2014a) notices, “[...] the way the past of the book is perceived by a specific thinker or group of thinkers, not only casts a light on how they perceive what the present and future of the book could or should be (as well as which issues will be most important in determining the future of the book); it also influences directly and materially both the object of the book and the discursive practices accompanying the book [...]” To a certain extent, book history can be used strategically, by retrieving and highlighting the aspects that are aligned with present forecasts of the future of the book. In this sense, it becomes crucial to analyze the relationships between the book as artifact — with the role it carried and it acquires when networked technologies become ubiquitous — and the discursive re-orientations that come from technologists, historians, and cultural theorists. In other words, the way we read the history of books influences its future, while the present evolution of the book fosters a re-reading of its history. Adema's perspective is echoed by Jay David Bolter (2001, 19):

The technology of modern writing includes not only the techniques of printing, but also the practices of modern science and bureaucracy and the economic and social consequences of print literacy. If personal computers and palmtops, browsers and word processors, are part of our contemporary technology of writing, so are the uses to which we put this hardware and software. **So too is the rhetoric of revolution or disaster that enthusiasts and critics weave around the digital hardware and software.**

Before going into the analysis, it is important to specify that there is no such thing as the book as stable medium, despite the nostalgic rhetoric of an ideal book that is supposed to disappear soon. As Adema (2014b) puts it

The book as a medium is thus never ‘done’ and gets reconstituted and reimagined constantly: by technological developments; by the ongoing debate on its meaning, function, and value; by historical developments (i.e. reactions to other ‘newer’ media via remediation, appropriation or remix); by the political-economies and social institutions with their accompanying practices, in which the book functions; and by new uses, which include new material practices and the changing context of the production and consumption of books.

At the same time, it is relevant to acknowledge that the physical book does not represent anymore the central artifact of the production and consumption of knowledge. According to George P. Landow (1996, 209), “In many ways, we have, for better or worse, already moved beyond the book. Even on the crudest, most materialist standard involving financial returns, we no longer find it at the center of our culture as the primary means of recording and disseminating information and entertainment.” Graphic designer Daniel van der Velden (2011, 156) speaks of the role of networks: “In recent years the economies of offline print and online content have merged as networks invade the book’s former sovereignty.”

Both in the generalist and the specialistic media, the discourse around new forms of knowledge production, dissemination, and reception crystallized under the label of ‘the future of the book’. Writer Tim Carmody (2010) identifies two opposite factions in this debate: technofuturists and bookservatives.

Bookservatives see the diminishing of the established material and social networks of reading as an unmitigated catastrophe that threatens to destroy humanist and democratic culture. Technofuturists see the same transformation as an unmitigated triumph that realizes humanist and democratic ideals better than the existing order ever could.

An example of the first kind is Alan Kaufman (2009), according to which “[the advent of electronic media] is a catastrophe of holocaustal proportions.” Example of the second category is Basheera Khan (2009), who titles her *Telegraph* article “No more bookshops? Good riddance.” In order to escape such unprofitable dichotomous clash, Carmody proposes a new approach that goes under the name of “Bookfuturist”. Bookfuturists, unlike to Italian futurists, don’t put history aside but they build upon it, trying to “to look for the technological sophistication of traditional humanism and the humanist possibilities of new tech” (Carmody 2010).

In his introduction to the *Future of the Book*, Geoffrey Nunberg (1996) describes the state of the debate around the book. As he maintained in 1996, this was “dominated” by the prophecies of techno-futurists. These people tended to portray the book, as well as the protocols and the institutions around it, doomed to extinction in the face of the groundbreaking revolution brought by digital media. This position provoked, in turn, strong and animate reactions, mostly focused on marginal or non-intrinsic aspects of stand-alone or networked computers. For instance, novelist E. Annie Proulx, famously maintained that “Nobody is going to sit down and read a novel on a twitchy little screen. Ever” (quoted in Nunberg 1996, 9).

1.1. The ‘Decentered’ Book and the Debate Around It

While, after 20 years, twitchy little screens have been replaced by more sophisticated one able to compete with printed paper (allowing people to read novels), the terms of the debate haven’t changed much¹. According to Nunberg, both parties of the debate were guilty of a fetishism characterized by an understanding of the future dependent only on the artifacts that mediate discourse. Another term for such fetishism could be techno-historical determinism.

In the same collection of essays, Paul Duguid (1996) identifies two “futurological tropes” that characterize the arguments of the techno-optimist and in turn unleash the reactions of the bibliophiles; these are *supersession* and *liberation*. According to ‘supersessionists’, new technologies are to completely replace the old ones: e.g. in a future with ebooks there will be no space for physical codex. The second trope has to do with the idea that information — or content, in Bhaskar’s terms (cfr. 1.3) — thanks to digital technology is freed from its physical container, which is seen as a form of imprisonment. This trope can be summarized as the slogan “information wants to be free”, infamously invoked by Stewart Brand².

The supersessionist rhetoric is imbued with a vision of progress that is linear, uninterrupted, and inevitable. Such rhetoric is not only promoted by technologists, but also by cultural theorists. Duguid (1996, 68) maintains that supersession is fundamentally a “marketing ploy” meant to build new markets in a industry led by novelty. According to the author, the main issue with supersession is that it fails to acknowledge the continuities with the past and therefore, paradoxically, “Declarations of separation may actually be one of the ties that perennially binds one generation to another.”

According to the rhetoric of liberation, the book is not anymore an “incarnation” of the text, but a prison, a form of incarceration. Seeing the book as a cage influences the way electronic means are perceived, for instance as carriers that bring universal and democratic access to information, or, as Landow suggests, tools that liberate the reader from “the tyrannical, univocal voice of the novel”. The fallacy highlighted by Duguid (1996, 76) is that electronic means represent a technology exactly like physical books, therefore it is non-sensical the attempt to free technology from technology. The author proposes instead to consider the relationship between book and text not as fully independent but mutually constitutive; in this sense he suggests to consider the two like, for instance, metaphorically speaking the dancer and dance she performs.

While the book edited by Nunberg mostly collects the thoughts of scholars who tackle the subject from a theoretical and historical point of view³, it is useful to look at the perspective of practitioners. In this sense, *Book: A Futurist Manifesto* (2012) proves to be a useful counterpoint: like the *Future of the Book*, it is a collection of essays and represents a reflection on the future of the book by looking at its current state. Interestingly, the process to create the

1 This is confirmed by the plethora of articles and papers beginning with pointing out the fact that print is not dead yet. An interesting twist in this sense is found in *Fully Booked - Ink on Paper*, whose prologue starts with this words: “Let me stat this for the record: The internet is not dead. Digital will not disappear. Print will not kill the web.”

2 Apparently, the slogan was firstly pronounced in 1984 at the first Hacker Conference.

3 With the exception of Jay David Bolter and Michael Joyce who, together with John B. Smith, created Storyspace, a software for developing and displaying hypertext fiction.

book is carried out on the principle of “practice what you preach”, in fact it was produced and released through PressBooks⁴, a platform just released at the time by the two editors of the book and published by O'Reilly, “a publishing company known for its aggressive embrace of digital innovation.” Guided by the fact that the “move to digital is not just a formal shift, but a fundamental restructuring of the universe of publishing.”, Hugh McGuire states:

We wanted our contributors to be not just perceptive thinkers, but also doers, people who are building the kinds of tools and companies that will continue to shape publishing for years to come (McGuire and O'Leary 2012).

In one of the collected essays, Brian O'Leary (2012) speaks of the inevitability of media convergence caused by digital technology. In his view, physical containers like books, newspapers, and magazines represent a fundamental problem: these supports establish the boundaries between content and context. This perspective extends itself to the way users are perceived, as they are seen as if they are in need of these containers, instead of answers or solutions. Therefore, according to O'Leary, the shift in the publisher's mind has to do with the idea of seeing these containers as outputs instead of sources.

O'Leary fosters the ‘liberation trope’ by considering physical containers as a “form”: “The long history of using physical containers to distribute content, for example, has led us to conflate ‘format’ with ‘brand.’” To technically overcome what the author calls “container myopia”, it is necessary to think of publications as APIs (Application Programming Interfaces) so that users/readers could “look under the hood, mix and match chunks of content, and create, seamlessly, something of their own.” Such new freedom would allow users to link, expand, and annotate texts.

The argument for supersession is often connected to an infamous motto retrieved from Victor Hugo's (2006) *Notre-Dame De Paris*: “Ceci tuera cela” is what Claude Frollo, the archdeacon of Notre-Dame, cries when he realizes that the printed book will eventually destroy the traditional culture of the church professed through the images on the cathedral's walls. When this slogan is applied to the clash between books and digital media, it reveals a few biases. For instance, if we consider the ebook as a successor of the printed codex, we realize that the relationship between these two artifacts is not so obvious and linear as it seems. As Ted Striphias (2003) argues, both scholarly writing and popular debate is characterized by a *necessary* ontological connection between the “traditional book” and the ebook. In accordance with Duguid, this could be interpreted as a marketing strategy. In order to overcome such “singular, static relation”, Striphias asks:

What other relationships and understandings, I wonder, might emerge from a more rigorously historicized and contextualized account of ebooks, one which refuses to treat their relationship to what Bolter calls ‘a traditional book’ necessarily as a privileged reference point?

Similarly, it is not necessarily true the the new textuality brought by electronic means derives from the codex. In this respect, Carla Hesse (1996, 23) points out that “books have never been

4 <http://pressbooks.com/>.

1.1. The 'Decentered' Book and the Debate Around It

the exclusive, or even the most prevalent form of printed matter, though they have been the most privileged and most protected." According to Hesse, the emerging electronic textuality, more than presenting itself as an evolution of book publishing, closely resembles the processes invented and tested by the 18th century's periodical press. Such publishing field was characterized by "the excitement about the combining of image, music, and text, the reassertion of the editorial over the authorial voice, the notion of the text as a bulletin board, and, alternatively, as a transparent network for the exchange of letters" (Hesse 1996, 24).

Looking closely at the motto "Ceci tuera cela", we realize that the very terms of the comparison are dubious. In Umberto Eco's words (afterword to Nunberg 1996, 295), "we know enough about *cela* (the book), but it is uncertain what is meant by *ceci* (computer). An instrument by which a lot of communication will be provided more and more by icons? An instrument on which you can write and read without needing a paperlike support? A medium through which it will be possible to have unheard-of hypertextual experiences?" If we consider the Internet as *cela*, we realize that it basically subsumes all the functions related to book production, distribution, and consumption: "because the Internet is both a telegraph and a text storage device that carries out algorithms, it unifies the functions of the book, library, salon and poetry machine." (Cramer 1999, 55).

But are we sure that "we know enough about *cela* (the book)"? The problem is, as discussed above, that the debate around the future of the book modifies our understanding of what the book itself is and was. At the same time, specific innovations (like the electronic hypertext) tend to produce specific readings of the history of the book in which some peculiar aspects are highlighted. Keeping in mind that "the category of 'the book' is itself the result of a fortuitous concourse of institutions, genres, and technologies" (Nunberg 1996, 19), it's useful to identify and frame these different perspectives, trying to understand where they come from and what they imply in terms of the development of new modes of publishing.

Just to give a glimpse of the abundance of interpretations, here's a list of definition of what a book is. Hugh McGuire (quoted in O'Leary, n.d.) defines the book as "a discrete collection of text (and other media), that is designed by the author(s) as an internally complete representation of an idea, or set of ideas; emotion or set of emotions; and transmitted to readers in various formats." According to the historian of artists' books and digital humanities researcher Johanna Drucker (2004, VII), "the book is a dynamic interface, a structured set of codes for using and accessing information and navigating the experience of a work." Borrowing from German philosopher Ernst Cassirer, media theorist Florian Cramer (2013a) suggests to consider the book as a "symbolic form", since it is able to transcend diverse media and supports. Kevin Kelly (2011) maintains that "a book is a self-contained story, argument or body of knowledge that takes more than an hour to read. A book is complete in the sense that it contains its own beginning, middle, and end."

As seen above, the main aspect that affects the current understanding of the book has to do with the distinction between content and container, something that was difficulty conceivable before the advent of communication theory (in particular with Claude Shannon), media theory (especially with Marshall McLuhan), and the popularization of digital technologies. A major affirmation of a paradigm characterized by the disconnection between form and content was probably fostered by the spread of HTML and CSS (which reinforce a differentiation

between content and presentation), and afterwards the concepts of ‘mobile-first’ and responsiveness. According to Landow (1996, 218):

As literary theorists have emphasized for decades, one must distinguish between the text itself and its physical embodiment in a particular delivery vehicle, reading site, or machine. Digital information technology permits us to perceive that books, printed books, are machines just as are computers that handle or present text.”

In a somehow tendentious fashion, Landow (1996, 214) also states that “we have already moved far enough beyond the book that we find ourselves, for the first time in centuries, able to see the book as unnatural, as a near-miraculous technological innovation and not as something intrinsically and inevitably human. We can, to use Derridean terms, decenter the book. We find ourselves in the position, in other words, of perceiving the book as *technology*.”

The features of the book that we take for granted — seriality, fixity, ‘boundedness’ — are put into question, so are the literary genres, often derived or influenced by technical means of production (e.g. it wasn’t economically and technically feasible to produce a ten pages book). Andrew Savikas (2012) makes the distinction between *form* and *format*. The former is “the character of the content,” one could say its genre: article, essay, but also movie or song. The latter is more or less equivalent to the notion of container but in the author’s idea, it also includes “things like business model, price, supply chain, and distribution mechanism.” I’ll look now more in detail at a series of useful perspectives.

BOOK AS PRACTICE

Since, as I discussed above, big part of the debate on the “future of the book” is characterized by a comparison between the physical properties of printed books and the ones of electronic books, a relevant shift of perspective involves looking at books as practices. In Doctorow’s words (2004): “I take the view that the book is a ‘practice’ — a collection of social and economic and artistic activities — and not an ‘object.’” While this mostly means for Doctorow to look at the way book is produced — “I write all of my books in a text-editor (BBEdit, from Barebones Software — as fine a text-editor as I could hope for). From there, I can convert them into a formatted two-column PDF. I can turn them into an HTML file. I can turn them over to my publisher, who can turn them into galley, advanced review copies, hardcovers and paperbacks.” — scholar Johanna Drucker (2013) speaks of “performative materiality” which “suggests that what something is has to be understood in terms of what it *does*, how it works within machinic, systemic, and cultural domains” (cfr. 2.2.2). This resonates with the way digital objects are perceived, mostly performances:

Especially when taking into account networked computing, objects seem like a rather misguided attempt to define boundaries, so that infinity can be divided into understandable pieces. And the objectification of the digital (in the form of for example ‘apps’) has proven that this idea is very successful. However it is impossible to represent digital culture in the form of objects. It is more productive to think about performances (for what computers do), activities (for what humans do), how time passes for each actant, and what are the potentials at any of these possible points (Espenschied 2014).

1.1. The 'Decentered' Book and the Debate Around It

BOOK AS SYMBOLIC OBJECT

In a 2012 interview by Peter Bi'lak, legendary Dutch book designer Irma Boom (2012) declared: "Often when I go to a bookstore I get really depressed by all the books that could have been PDFs." This approach well summarizes the re-location of the printed book in the current medial ecosystem. The debate around the future of the book had the reverse effect of rethinking the printed book and to reposition it in the new medial landscape. First of all, as Andrew Savikas (2012) points out, several typologies of books, as telephone books or dictionaries have been heavily disrupted by the advent of electronic and networked media. Designer and writer Craig Mod (2012) asks for rigor when designing a book that need to be printed. He proposes to adhere to the following steps when deciding to print a book:

- The Books We Make *embrace their physicality*, working in concert with the content to illuminate the narrative.
- The Books We Make *are confident in form and usage of material*.
- The Books We Make *exploit the advantages of print*.
- The Books We Make are *built to last*.

As a result of pervasive digitization, books become self-aware of their own physicality and tend to 'show off' their material qualities that become the differential threshold with their digital counterpart. Furthermore, they often tend to resurrect design solutions employed in artists' books and experimental publications. The physical appearance of books has a strong symbolic value. James Bridle (2010) describes the life/use of books in terms of a lifecycle. Contemporary books initially act as a form of advertisement, then they become a reading device, and finally, when they are placed on bookshelves, they become souvenirs of the reading experience. It is in this last phase that they exercise their symbolic power.

According to Régis Debray (1996, 141), the codex can be seen as "as symbolic matrix, the affective and mental schematization in whose dependence we bind ourselves more or less unconsciously to the world of meaning." Debray also forecasts the 'materiality backlash' that invests books, almost with an apocalyptic tone:

Electronic immaterialism could then be the prelude to a kind of return to earth, wood, and stone. And it might reinstate, as we await the return of parchment, the rare book printed with lead-cast type and bound with animal skin, the manuscript and (why not?) even epigraphy — the science and paleography of inscriptions" (Debray 1996, 150).

BOOK AS SERVICE

As early as 1966, Marshall McLuhan (1966/2010) envisioned the book as a full-fledged service that allows customization:

The future of the book is very much in the order of book as information service. Instead of the book as a fixed package of repeatable and uniform character suited to the market with pricing, the book is increasingly taking on the character of a service, an information service, and the book as an information service is tailor-made and custom-built.

This is the kind of approach that publishers are currently forced to adopt in the context of the fierce competition of other media and the abundant availability of content on the Web. Andrew Savikas (2009), CEO of Safari Books Online, maintains that “Whether they realize it or not, media companies are in the service business, not the content business. Look at iTunes: if people paid for content, then it would follow that better content would cost more money. But every song costs the same. Why would people pay the same price for goods of (often vastly) different quality? Because they’re not paying for the goods, they’re paying Apple for the service of providing a selection of convenient options easy to pay for and easy to download.” Again the book looks ‘decentered’ in respect to the service that distributes it.

This becomes even more evident with the Kindle ereader. CEO of Amazon Jeff Bezos (quoted in Levy 2007) thinks of it as a service instead of a device because of its seamless connection to the Amazon store. This was, and still is, supposed to change the relationship that readers have with books. For instance, Stephen Levy mentions the following possibility: “in fact, instead of buying a book in one discrete transaction, you could subscribe to a book, with the expectation that an author will continually add to it” (Levy 2007). This system fully changes the power relationships around the artifact and the way it is owned (cfr. 3.5). According to James Bridle (2012), “The Kindle connects the reader to a carefully, algorithmically managed world, a code/space that affects reader and reading, and ultimately writing and literature.”

NETWORKED, UNBOUND, CUSTOMIZED BOOK

The digitalization of books can potentially disrupt their fixity and seriality by allowing multiple authors to edit them in real time. Particularly poignant is the recursive definition of networked book provided by Wikipedia (“Networked Book” 2015):

A networked book is an open book designed to be written, edited, and read in a networked environment. It is also a platform for social exchange, and is potentially linked to other books and other discussions. Wikipedia is a networked book.

Designer and writer Craig Mod (2011) notices that digital render the classic features of print artificial. This leads to a context in which “When you look at the same digital book tomorrow, it may very well be different from the version you read today.” The digitalization also affect the boundedness of the book, which can be now fragmented fostering different marketing models. According to Brian O’Leary (2012), “Readers have expressed interest in options that include expanded editions as well as content that can be “chunked,” or bought and consumed as components.”

BOOK AS ONE OUTPUT AMONG MANY

The new condition of text detached from container led to the development of the notion of content, unthinkable before the advent of digital publishing. This also brought an idea of publishing which requires the same content to exist in different instances as different formats in order to respond to the fragmentation of the reading contexts. For instance, the same text can

1.1. The 'Decentered' Book and the Debate Around It

exist as paperback, print on demand book, EPUB ebook⁵, website, iOS app, audiobook, etc. Several slogans were coined to respond to this mutated scenario. One of this is "Create Once, Publish Everywhere" (COPE), developed by Daniel Jacobson (2009), director of Application Development department of NPR. COPE is dependent on other sub-principles:

- Build content management systems (CMS), not web publishing tools (WPT);
- Separate content from display;
- Ensure content modularity;
- Ensure content portability.

This kind of approach has direct effect on design. In fact, NPR suggests that "flexible content is design agnostic". The DPT Collective (2015) speaks instead of hybrid publishing, meaning with that the hybridity of outputs, while a more precise term would be multi-channel publishing. The Hybrid Publishing Consortium, part of Leuphana University (Germany) has the following motto:

Every publication, in a universal format, available for free in real-time (Worthington 2015).

The Consortium aims at reaching this goal by developing the "Platform Independent Document Type", "an open standards [sic] based and transmedia structured document for multi-format publishing." Such open standard requires in turn a radical transformation of the current publishing workflows and the need to "atomise the book": "breaking it down into its smallest parts, before rebuilding a computable representation."

1.2. From The Future of the Book to the Present of Publishing

1.2.1. *Publishing, Publication, Publisher, Public* — A Terminological Exploration

Publishing should be defined as broadly as possible, almost to the boundaries of life and culture. Consider the publication of genomic material, or, via increasingly sophisticated brain scanners, of the electro-chemical activity of the brain [...] (Murphie, 107-8).

Publishing is a widely used term. Until a few years ago, it was mostly referred to professional authors, publishing houses, and newspapers — "Stephen King just published a new book" —, but in the last decades it became an activity carried out daily by most internet users: "I'll publish an article on my blog", "She published a funny picture", and so on. In the context of an abundance of Web-native formats and platforms, the term is frequently substituted with some other ones: 'tweeting', 'posting', 'sharing', or even simply 'writing'.⁶

5 Or Mobi, the corresponding Amazon proprietary format.

6 Twitter, Facebook, Google+.

Publishing is constantly mutating to respond to the socio-economical conditions, so there's no way to reach a definitive/stable understanding of it. According to Bhaskar (2013, 28), "there can no be a history of publishing, but only publishings". It is nonetheless useful to highlight the way these different aspects coexist. The aim of this section is to highlight some of the intrinsic aspects of publishing that are likely to be at the core of a redefinition of the term. This exploration is guided by the following principles:

- experimental works intrinsically push the boundaries of their own field, tending to redefine it. Thus, it is important to look at marginal aspects of publishing in order to frame what is possibly disrupted by experimental practices.
- the perspective on the following models is unavoidably shaped by the current context characterized by the pervasiveness of digital technology. In this sense, the question to ask should not be "what happens when publishing goes digital?", but instead: "what understanding of publishing is produced by a digitally-informed perspective?"

The exploration draws from the history of books, from definitions that derive from the advent of the Web, and from approaches provided by independent publishing houses and individual thinkers and practitioners.

In *The Content Machine*, Michael Bhaskar dedicates a whole section to publishing as the term itself. Here we follow his route and focus on specific aspects. The verb *publish* originally stems from the Latin "public", that becomes "publicare" (make public) and goes to the French *publier*. Similarly, *publication* originally means "the act of making publicly known". From the mid 15th century, the term *publishing* acquires its current commercial meaning of "the issuing of copies of a book for public sale". Finally the term *publication* acquires this similar meaning, "the issuing of a written or printed work" is first recorded 1570s; as the word for the thing so issued, from 1650s.⁷

PUBLISHING

According to the *New Oxford American Dictionary*, 'publishing' is "the occupation or activity of preparing and issuing books, journals, and other material for sale". Here there is no account of a non-commercial definition, and the same goes for the Merriam-Webster,⁸ or for more specific dictionaries like the Collins (2006). Paradoxically, the *Webster's Revised Unabridged Dictionary* of 1828 provides a way more comprehensive definition: here, publishing means "Making known; divulging; promulgating; proclaiming; selling or offering publicly for sale; uttering."⁹ The sole act of uttering becomes an act of publication. This latter meaning seems to well reflect the contemporary state of the publishing act, that, being immediate thanks to digital technologies, almost disappear as a specific phase, merging itself with writing.

7 These etymologies are found on <http://www.etymonline.com>.

8 <http://www.merriam-webster.com/dictionary/publishing>.

9 <http://machaut.uchicago.edu/?action=search&word=publishing&resource=Webster%27s&quicksearch=on>.

1.2. From The Future of the Book to the Present of Publishing

PUBLISH

Similarly, the verb ‘publish’ seems to have mostly a commercial characterization: if the published item is not for sale, it is not publishing.¹⁰ Again, the *Webster’s Revised Unabridged Dictionary* from 1913 broadens the term including “To make public; to make known to mankind, or to people in general;” and “To utter, or put into circulation”¹¹. The *Collins* acknowledges the adherence of the act of publishing to the process of print. An interesting definition provided by the crowdsourced Wiktionary, specifically contextualizes publishing in the internet :”To convert data of a Web page to HTML in a local directory and copy it to the Web site on a remote system”¹².

PUBLICATION

The term ‘publication’ seems to generally offer a broader spectrum of meaning as both the “preparation and issuing of a book, journal, or piece of music for public sale” and “the action of making something generally known”.¹³ “Publication” stands of course also for the artifact that “is published or made known”.¹⁴ An older definition also encompass “An act done in public”.¹⁵ It is interesting how the term publication includes both general and commercial processes and the deriving artifacts.

PUBLISHER

According to the *New Oxford American Dictionary*, a publisher is “a company or person that prepares and issues books, journals, or music for sale”. This definition seems to be in use from 1740.¹⁶ A more general one, which has a negative meaning, comes from the *Webster’s Revised Unabridged Dictionary*: “One who utters, passes or puts into circulation a counterfeit paper.”¹⁷

PUBLIC

According to the *New Oxford American Dictionary*, by the term public we generally mean “ordinary people in general; the community” or “a section of the community having a particular interest or connection”. As adjective, it means something that is “done, perceived, or existing in open view” and “of or concerning the people as a whole.”

10 *New Oxford American Dictionary*.

11 <http://machaut.uchicago.edu/?resource=Webster%27s&word=publish&use1913=on>

12 <http://en.wiktionary.org/wiki/publish>

13 *New Oxford American Dictionary*.

14 <http://machaut.uchicago.edu/?action=search&word=publication&resource=Webster%27s&quicksearch=on>.

15 <http://machaut.uchicago.edu/?action=search&word=publisher&resource=Webster%27s&quicksearch=on>.

16 http://www.etymonline.com/index.php?term=publisher&allowed_in_frame=0.

17 <http://machaut.uchicago.edu/?action=search&word=publisher&resource=Webster%27s&quicksearch=on>.

1.2.2. Communication Circuits

One way to approach the publishing ecosystem is to analyze and compare the models that come from the field of book history. Book historiography — that according to Darnton (1982, 65) could be called the “social and cultural history of communication by print” — includes “all aspects of the history of production, publication and distribution, from the stage of authorship on through to the impact of books on readers and, ultimately, on society” (Adams and Barker 1993, 48). Its many facets witness the interactions between the agents involved, being them social, economic, or cultural. This has at least two implications in relation to the goal of this section:

1. Our main period of interest, the one in which publication is influenced — directly and indirectly — by the presence of digital technologies, represents an extremely tiny portion of book history. Furthermore, while the historical perspective naturally implies a backward look, we inform the current context with an historical and broader perspective.
2. With some exceptions, the printed book, “a force in history” (Darnton 1982, 65), is the main character around which the analyzed models revolve. This implies that much of the terminology employed in the studied models need to be updated or generalized.

In 1982, Robert Darnton proposed a model that he called the “communication circuit”, which aim was to provide a holistic vision of the way books are produced, distributed, and used, showing how each phase is bound to the others in both directions. In this way he hoped to reduce the field to a set of common problems. According to Darnton (1982), the model could be applied more or less to every period of the history of the printed book. By privileging the history of human agents involved, Darnton built his model upon the communication processes among them.

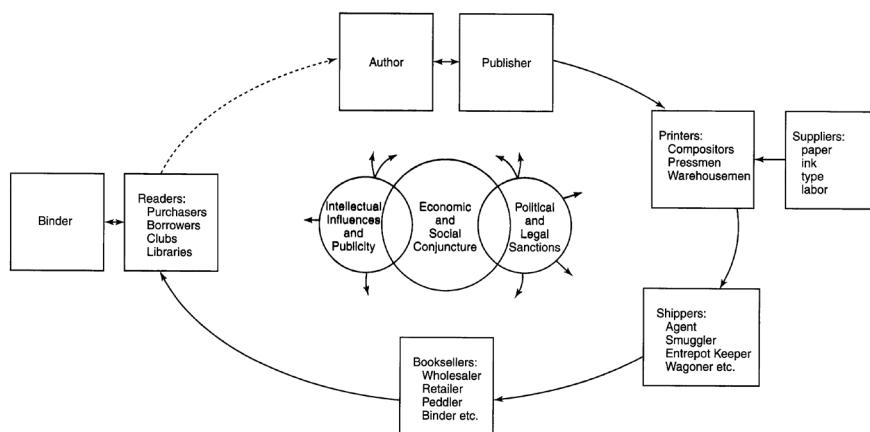


Fig. 1: Darnton's communication circuit.

The first agent in Darnton's model is the author, who has a back and forth communication with the publisher. The next one is the printer, tightly connected with the suppliers of raw materials, byproducts, and labor. Then we have the shippers, the booksellers, and finally the readers, including individual book buyers, borrowers, clubs, and libraries. Finally, readers are connected back to the author, as they, often being writers themselves, influence the author

1.2. From The Future of the Book to the Present of Publishing

both before and after the writing process (Darnton, 1982). The whole circuit is influenced by external agents grouped in “intellectual influences and publicity”, “economic and social conjuncture”, “political and legal sanctions”. Obviously, the model is highly influenced by the long history of printed books: an example is the prominent presence of binders. At the same time, Darnton introduced modern aspects such as the distinction between publisher and printer.

Darnton (1982, 79) maintains that “the history of reading will have to take account of the ways that texts constrain readers as well as the ways that readers take liberties with texts”. This reflection well resonates with the current conditions of publishing: if we look for instance at the Kindle ecosystem, we can see that both tendencies could be highlighted: while the user has the freedom to modify the way text appears on the display, she cannot duplicate the files stored on the device. Darnton also expresses the need of studying the book in relation to other communication media.¹⁸

Darnton's model, now considered a milestone in the field of book history, gave birth to endless modifications and adjustments. In his 2007 revisit of the essay, the scholar explains the reasons why he tried to design a schematic representation of the relationships between agents: “The esoteric elements of book history needed to be integrated into an overview that would show how the parts could connect to form a whole—or what I characterised as a communications circuit” (Darnton 2007, 495). Such need is even more urgent nowadays, when the actors in play have increased as well as their various relationships, since Darnton's model is focused on “publishing and the book trade during the period of technological stability that stretched from 1500 to 1800”.

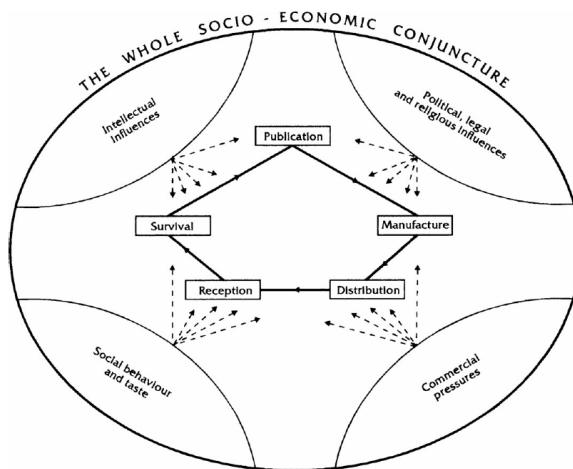


Fig. 2: Adams and Barker's model.

In the same essay, he discusses one particular update of his model by Thomas R. Adams and Nicolas Barker (1993), which he considers an improvement. The subject of the diagram are

18 Ted Striphias' notion of intermediation (cfr. 2.2.1) echoes this necessity of considering the reciprocal influences of media.

“bibliographical documents” instead of books, including ephemeral printed matter like, for instance, libels or bills. Adams and Barker consider a bibliographical document “something printed or written in multiple copies that its agent, be it author, stationer, printer or publisher, or any combination thereof, produces for public consumption [...] The controlling factor is that the document was designed to perform a specific function, either private or public.” Such notion can be also applied to recent digital ephemera related to a published work, such as metadata, book trailers, blog posts, and so on.

At the centre of this model there are five “events” or phases that form a loop: *publication, manufacture, distribution, reception, and survival*. These events are immersed in “the whole socio-economic conjuncture”, which includes: intellectual influences; commercial pressures; political, legal, and religious influences; and social behavior and taste. According to Darnton, the survival phase represents a fruitful addition as it shows the afterlife of books, like, for instance, new editions, lendings, or acquisitions by libraries. The survival phase shows how context affects texts, and how they circulate through different embodiments, a notion useful to look at the circulation of texts in the digital environment, where PDFs, inscriptions on retail platforms, reviews, unofficial translations, fragments, and different formats coexist within what Darnton calls “the changing contexts of reading and of literature in general”. While Darnton’s model is people-centric, Baker and Adams’ one tends to be process-centric. Highlighting phases instead of roles is an advantage in a context in which more than one role is carried out by a single individual or by machines.

Adams and Barker (1993, 53) define publishing as “the point of departure, the initial decision to multiply a text or image for distribution”, specifying that “the decision to publish, not the creation of a text, is, then, the first step in the creation of a book.” By contrast, they also acknowledge unintentionality of reception: “Of equal importance is the unintended audience: that is, the people to whom the publication found its way, unanticipated by the author and publisher.” To make a comparison with the current digital environment, such notion of “accidental audience” has been contextualized by US artist and designer Brad Troemel in the field of visual art, thorough his own experience with the collective blog the Jogging¹⁹. In a blog post published in *The New Inquiry*, Troemel (2013) analyzes the ways in which the accidental audience reacts to visual art on visual blogging platform like Tumblr. Here, the artistic intention is erased and the work effectively looses its aura. Such radicalized and pervasive unintentionality is currently not only domain of images but also texts. This loss of control is also mentioned by Adams and Barker (1993, 59) as a defining aspect of publishing:

Looking at the extent to which the act of publishing achieved its intended goals is only one criterion of reception and, in larger terms, a comparatively small aspect of the subject. The larger one is made up of the results that go beyond the original intention. One of the frequently neglected results of a decision to publish is the loss of control over what happens next.”

Finally, Adams and Barker ask: “What was the influence of physical circumstances on reading? What role did illumination play? Did the variation in hours daylight at different latitudes have any effect on patterns of reading?” The questions they pose are strikingly similar to the

19 <http://thejogging.tumblr.com/>.

1.2. From The Future of the Book to the Present of Publishing

present archeology of the material conditions of reception, often read on blogs reviewing reading devices like the iPad.

In 2000, Dutch scholar Adriaan Van der Weel proposed another variation of Darnton's model. His main focus was the production and circulation of electronic text on the internet. Firstly, Van der Well (2000, 17) notices that "in contrast with the production of printed books, digital production for publication on the internet does not involve multiplication, but only the editorial and formatting tasks." Also, by extreme simplification, Van Der Well realizes that in an online context, the publisher's control can be circumvented by the author, who becomes a disintermediate entity. This has a general democratizing effect, both for authors and for readers. At the same time, he acknowledges a byproduct of the practice of a traditional publishers, who act as filter and gatekeeper, by actually selecting certain works and excluding others. A function still "useful" today, that counterintuitively can leads to greater access:

Through the selection task of publisher (and bookseller), paradoxically the accessibility of texts is increased as well as diminished. As well as selecting on saleability (both publisher and bookseller will choose what they think a sufficient number of people would actually pay money to read), they create order in what is published, for example through the nature of their imprint (Van der Well 2000, 20)

Thus, the crude simplification of the model derived from technical innovation does not take into account the social value of the publisher, who can provide accessibility. According to John Maxwell (2014) accessibility has been a core issue of publishing fro long time: "Publishing has always put accessibility first (possibly excepting very recent history). In the age of print, to make copies of works and distribute them was the very best possible way of making things accessible, to the extent that this was treated as radical and dangerous for a long time."

In contrast to both Darnton and Adams and Barker, Rachel Malik (2008, 707) argues that "publishing precedes writing and governs the possibilities of reading". Here's her definition of publishing:

a set of historical processes and practices — composition, editing, design and illustration, production, marketing and promotion, and distribution — and a set of relations with various other institutions — commercial, legal, educational, political, cultural, and, perhaps, above all, other media (Malik 2008, 709).

According to Malik, the practice of publishing is surrounded by a series of "horizons" that set constraints to what is actually readable and writable. It follows that writing and publishing are not two subsequent phases but the latter incorporates the former. Furthermore, her perspective takes into full account the 'decentering' of the book:

Book history inevitably tends to make the book its center. In contrast here, the publishable, as a set of horizons, is conceived within a broad map of cultural and media relations (Malik 2008, 716).

1.2.3. Everyone is a Publisher: Publishing as a Function and as a Default Activity

Anyone with a modem is potentially a global pamphleteer (Markoff 1995).

According to John Maxwell (2014), publishing is “perhaps the very prototype for industrial activity.” Such field is able to connect industry, art, and craft. As we have seen, previous definitions mostly acknowledge publishing as industry. But with the advent of computers, internet, and the World Wide Web, we assisted to a paradigm shift, summarized in the truism “everyone is a publisher”. In relation to the previous definition, this statement raises several questions. Among them, it is legitimate to ask whether publishing as an individual activity carried out through networked digital platforms is disconnected from commerce or what remains of the roles traditionally covered by publishers.

What makes ‘everyone a publisher’ is the common availability of publishing tools and platforms, like CMSes²⁰ and social networks. These tools are not only used by individuals, but by companies as well. According to Mike Shatzkin (2013), we assist to a process of atomization in which “soon — in the next 5 or 10 years — every university (perhaps most departments within a university), every law firm and accounting firm and consulting firm, certainly every content creator in other media, as well as most manufacturers and retailers will become book publishers too.” In synthesis, publishing is shifting from an industry to a function. Such reductionist point of view is shared by Clay Shirky (2012), according to whom “publishing is not evolving. Publishing is going away. Because the word ‘publishing’ means a cadre of professionals who are taking on the incredible difficulty and complexity and expense of making something public. That’s not a job anymore. That’s a button. There’s a button that says ‘publish,’ and when you press it, it’s done”.

The “Everyone is a publisher” narrative seems to have become prevalent during the rise of the so called Web 2.0, characterized by the possibility for users to dynamically create and manipulate content on webpages. In 2007, Thomas Friedman declared in *The New York Times* that “when everyone has a blog, a MySpace page or Facebook entry, everyone is a publisher.” The point of the article was to relate the persistence of electronic memory and the difficulty to erase content. The risk with such narrative is to diminish the very present role of platforms and tools as mediators. Therefore, it is legitimate to ask whether the publisher is the ISP (Internet Service Provider), the social network that hosts the published content, the search engine that allows to actually find it, or, finally, the user/author. Bhaskar (2013, 68) asks: “In the network age who is the publisher but Google, aiding discovery, or Wordpress, the platform from which a writer speaks? Even the microblogging service Twitter, then, is a form of publisher.”

1.2.4. From Publishing to Publication: Producing a Public

Matthew Stadler (2010), co-founder of Publication Studio — an experimental publishing house based in Portland — proposes a shift from the term ‘publishing’ to ‘publication’. The main issue that such shift addresses is: “how do you make a readership that cares and will

1.2. From The Future of the Book to the Present of Publishing

care over time?” Stadler defines publication as the creation of a public, which he considers a political act. A public in fact is more than a market. Three deliberate acts contribute to the creation of a public: physical production, digital circulation, and social gathering. The physical production of books is simplified thanks to digital technologies that make production means easy to use and widely available. In this sense, a public is a space of conversation, therefore a public space. Stadler argues that a book itself can comprise a public space. Interestingly, in Stadler’s view, the notion of publication also includes the design of public places.²¹

Stadler also explains what a publication is not: “the sale of books per se, not just the pursue of beauty, not just the creation of a record, of an archive, not simply a tool for transmitting informations.” Publication, which is a political strategy, requires sensitivity to context, equanimity, consistency, and transparency. Stadler concludes by indicating that the nature of a public is a reciprocal conversation that requires an active effort to maintain the conditions in which it thrives.

English professor Michael Warner (2002, 413) makes a distinction among three different typologies of public:

1. *the* public; what we imagine as “a kind of social totality”, coinciding with what we call the public sphere;
2. *a* public; a concrete audience, often spatially determined;
3. “the kind of public that comes into being only in relation to texts and their circulation”.

Warner highlights the circularity of the relationship between text and its public: the latter only exists “*by virtue of being addressed*”. He asks how it is possible to quantify a public; a common need currently solved with digital services like analytics, but he warns us on the fact that any kind of analysis — e.g. polls — are inevitably a form of mediation that modifies the analyzed object. According to Werner (2002, 421), circulation is crucial to the thriving of a public:

A text, to have a public, must continue to circulate through time, and because this can only be confirmed through an intertextual environment of citation and implication, all publics are intertextual, even intergeneric.

1.2.5. The Role of Publishing: From Gatekeeping to Filtering

A different kind of critique to the “everyone is a publisher” motto comes from artist and writer James Bridle (2011). In his words:

Contrary to popular thought, everyone is not a publisher. When you hear a publisher say it, it’s even sadder. Publishing is a complex and well established collection of knowledge, competencies and processes, refined over time, practiced under forever difficult circumstances in a frankly indifferent market. Which is not to say that it’s exclusive: the bar to entry has dropped massively, obviously, in the last ten years. But it’s still hard, and hard to do well, and

²¹ The project FOMO by Space Caviar, analyzed in 3.3, represents an interesting actualization of this idea since it is based on the real-time creation of zines whose content is the discussion happening at specific event.

the rewards are still small. Writing something and putting it on the internet is not publishing. Producing an application and getting it into the app store is not publishing. If you think everyone is a publisher, go home now, and come back when you've thought about what you do.

His critique deals with the roles performed by publishers. But what are these roles? We can divide between primary and secondary roles. If the primary role of publishing is to spread content, a secondary role is the one of cultural gatekeeper, an agent who actually selects what has enough quality to deserve to reach an audience.²²

According to the Encyclopaedia Britannica ("History of Publishing"), "the heart of the business lies in the editorial function. This has changed in its mode of operation through the years and still varies from one country to another and between firms but not in essentials. The editor — who is sometimes called the sponsor and who is often a director — selects the books to be published, deals with the author, and is responsible for the critical reading of the typescript (and its revision if necessary) and for seeing the book through the press, in consultation with the manufacturing and marketing departments."

As said before, Adrian van der Weel (2001) defends the role of the publisher even in the digital environment, where there is no immediate necessity of an intermediary in order to reach an audience. Publishers *create contexts* around content and by doing that they raise audience. Often we see an emergence of the publisher/editor paradigm in many of the activity we carry on online. We select, filter, curate our contents on blogs and social media, we use tags and categories, we reorganize our feeds.

Publishing is now a generative, recursive network of events, with multiple forms of feedback into the ongoing mutation of forms of publishing themselves [...] (Murphie 2008, 105).

Etymology and definitions show how the term *publication* may refer both to the act and the artifact: so we can imagine, especially in the field of experimental publishing, that the artifact might represent a reflection on the act or the process (a *meditation on mediation*). Also, as Stadler suggests, the term seems to best express the multidirectional relationship with the public. Still the term 'publishing' is appropriate because it reconnects to a technical and social legacy expressed by such expressions as 'desktop publishing', 'digital publishing', etc. A negative meaning of the word publisher connects to the notion of *digital samizdat*, mentioned, among others, by Umberto Eco (2011):

These anonymous editions, like the free circulation on the internet of texts not published elsewhere, are the modern version of the *samizdat*, the only way in which one can disseminate her ideas under a dictatorship and therefore escape censorship. All those who were once producing *samizdat* at their own risk can now put their texts online without major dangers.

We realize that even from the early definitions, like the one that corresponds to "uttering", there is a tendency to hide mediation. This is probably one of the biggest issues in the contemporary media landscape: by hiding mediation, all the influences that this has on what is

22 Italian writer and publisher Roberto Calasso — director of Adelphi for forty years — considers the editorial function of the publisher so important that he suggests to consider it a literary *form*.

1.2. From The Future of the Book to the Present of Publishing

published becomes hidden as well. At the same time, the strong presence of commercial definitions is useful, because they emphasize the commercial nature of publishing acts generally considered “non-commercial” like, for instance publishing a blog post.

The focus on the reader’s role is another crucial aspect: Darnton notices the fluctuation between freedom — freedom in interpretation and distribution of the ‘bibliographical documents’ — and constraints that derive from media stratification. The concept of freedom in digital environments is even more crucial. The notion of ‘bibliographical documents’ is particularly poignant when applied in a context in which content is spread through a series of channels and formats that go from RSS feeds to hardcover books. Different defenses of the role of the publisher were mentioned. While Van der Well focuses on the ability to create context around a publication and therefore increase readership, Bridle vindicates the value of the culturally stratified set of practices that are domain of publisher. Both relate to the “everyone is a publisher” motto, a notion that hides the inevitable levels mediation that have an impact in the publication practices. Finally, the survival phase opens up scenarios in which the publishing act is received by an unintended audience, which produces a loss of control taking place through circulation of digital and physical artifacts. The publisher can balance her influence on the circulation by acting as a sort of facilitator of the public space around the publication.

1.3. A Theory of Mediation: Content, Models, Filtering, Frames, and Amplification

In *The Content Machine*, London-based publisher and writer Michael Bhaskar (2013) sets himself the goal to develop a “unified theory of publishing” encompassing both the tradition of print publishing and the mutations provoked by the advent of digital technology and the internet. The implicit reader of Bhaskar’s book is the publisher who, in the current situation, is living an identity crisis. This is why the author states that “publishers need a more informed idea of their role” (Bhaskar 2013, 4). Such unified theory is based on a series of concepts that I describe and scrutinize here in order to employ them to look at experimental publishing. Those concepts are: ‘content’, ‘models’, ‘filtering’, ‘frames’, and ‘amplification’. An additional notion comprising the others is ‘mediation’: “a theory of publishing is a theory of mediation, of how and why cultural goods are mediated. It is the story behind media, rather than the story of a medium itself (like books or words), and has a big role to play in our understanding of communications” (Bhaskar 2013, 10). As discussed in the next sections, mediation is one of the primary focus of experimental publishing.

CONTENT

According to Bhaskar, content is one of the main currencies of networked media. It is important to consider that content represents the precondition for any kind of publishing practice. As an example of the current pervasiveness of content, the author refers to content farms: enterprises whose job is to produce textual material that complies with the way search engines ‘read’. The fact that the word ‘content’ suggests the presence of a container is somehow misleading because it implies the possibility of a clean separation between the two. Besides the limitations of such metaphors, the word ‘content’ generally acknowledges the presence of contexts and their effects. Referring to digital humanities and transmedia storytelling, Bhaskar (2013, 52)

calls content “an embodied form of knowledge”. Such notion is the result of the ease, fostered by digital encoding of information, in which text can flow in different forms from one place to another.

FRAMES

The term ‘frame’ is in first place a response to the notion of ‘container’ that, as mentioned above, is a flawed metaphor. Bhaskar looks at the work of Claude Shannon and Warren Weaver, and the work of Marshall McLuhan. Both contributed to produce a detachment between content and container. In Shannon’s view, content — which he calls the message — is independent from the container — the channel, in his words — it employs. In McLuhan’s terms, media contain other media (e.g. book contains writing) and what we would call content is rather irrelevant compared to the profound effects that media have on the way we experience reality.

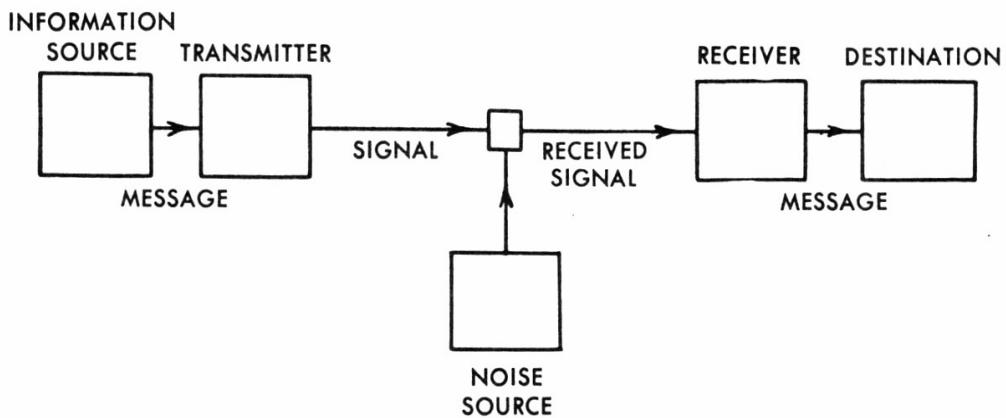


Fig. 3: Shannon and Weaver’s general communication system (1998).

Bhaskar still acknowledges the usefulness of a conceptual separation between content and form, and borrowing from McLuhan, his theory is aware of the effects of form over content. The reason why he opts for the term ‘frames’ is that they “are as much about presenting content as containing it. [They] are distribution mechanisms, channels and media. They are contexts, modes of understanding as much as duplicative technologies. Frames are not just delivery systems or packages for content but content’s experiential mode” (Bhaskar 2013, 84). The author also points out the fact that it’s impossible to encounter content immanently, but always in combination with frames. Thus, the publisher becomes a “constructors of frames” (Bhaskar 2013, 85). Considering screens or code is useful in order to grasp the adherence of the notion of frames: in both cases, it’s apparent that they do not contain the content but they contribute to represent it and make it visible. Finally, the author highlights the subjective framing that happens while experiencing a work: “the penumbra of preconceptions, prejudices, expectations, and complexes of personality and ideology subjectively brought to bear when cultural phenomena are encountered” (Bhaskar 2013, 89).

MODELS

Models can be seen as an “assemblage of motivations and expectations” (Bhaskar 2013, 96) according to which a certain strategy is carried out. Models are therefore what guides both the production of content, its framing, and its dissemination. As Bhaskar doesn’t forget to mention, the notion of model is often reduced to a publisher’s business model. Conversely, models are informed by a wider set of values and preconceptions that go beyond a purely commercial aim. As well as frames, content incarnates the models it is driven by. “Diffusive, nuanced and partially determining, models connect publishing to society” (Bhaskar 2013, 98).

FILTERING

Filtering, together with amplification, is at the same time the goal and an effect of any publishing practice: “filtering and amplification occur *through* frames *according to* models” (Bhaskar 2013, 104). According to Bhaskar, publishing naturally provides some sort of selection, driven by one or more models. The notion of filtering — a term that is more inclusive than selecting — opens up the doors to a wider range of possibilities and methods. As a reference to show the extent of filtering, Bhaskar mentions Web platforms like Facebook, that can be seen as co-publishers since their algorithms often act as a seamless filter of what is posted that affect reception. Filtering can also be seen as a response to the scarcity of attention brought by the apparent abundance of information on networked media, a phenomenon underlying the so-called “attention economy”²³.

AMPLIFICATION

The notion of amplification provides a concrete, tangible outcome to questions regarding the state of texts and whether they’re published or not. According to Bhaskar, positioning a definition of publishing between private and public state is an unpractical abstraction that leads to ambiguity²⁴. Amplification makes such task way more concrete by requiring “a movement from lesser to greater exposure” (Bhaskar 2013, 115).

Thus, amplification is characterized by a series of actions carried out to amplify the readership around a certain text. Framing is connected to such process, as it often occurs in order to amplify the work. Amplification is strictly dependent on the means and conditions of a specific time period and geographic context. As Bhaskar points out, where digital networks are

23 The ideas behind the notion of “attention economy” were probably introduced for the first time by Herbert A. Simon: “[...] in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients” (Simon 1971, 40-41).

24 The author provides an interesting thought experiment by asking whether “leaving a manuscript makes it ‘public’” (Bhaskar 2013, 114, footnote). *i left this here for you to read*, a project by Tim Devin made between 2008 and 2009, follows such line of thought: 50 copies of a monthly issues of a magazine were left by volunteers in public places of different cities for anyone to take (<http://timdevin.com/ileftthishereforyoutoread.html>). The project shows how experimental practices often investigate the boundaries of what is meant by publishing.

pervasive, “printing alone is no longer sufficient to constitute amplification” (Bhaskar 2013, 116). Furthermore, the focus of amplification shifts from “the distributional element, making it available, to the subjective, finding an audience” (Bhaskar 2013, 116). Here Bhaskar’s argument clearly echoes with Stadler’s notion of constitution of a public.



Fig. 4: Tim Devin, *i left this here for you to read*, 2008-2009.

MEDIATION

“For the Queen, far from making a secret of her affectionate friendship, took care to publish it to the world”. This sentence, taken from Lytton Strachey’s *Queen Victoria* (1921), shows how the verb ‘publish’ does not necessarily imply an intermediary or a mediating agent besides language. Such aspect is not fully disappeared from the modern interpretation of the term. Bhaskar (2013, 18) maintains that:

[...] in every understanding regarding content, mediation is the key. Part of the issue with ‘making public’ [...] is that it doesn’t bring mediation to the fore — the act of making public is almost assumed to just happen, as if it didn’t require a medium, or the process behind that medium, through which it happens.

The notion of mediation proves useful when looking at ‘disintermediation’, a process that is generally accepted to be one of the effects of the technological transformations of publishing²⁵. By asking what forms of mediation emerge in the digital and networked context, it is possible to highlight actors and agents that are overlooked by a ‘traditional’ editorial perspective.

25 Mediation incorporates various meanings. In the field of publishing, thinking of a person or a enterprise is immediate. Here the OED definition comes in handy: “agency as an intermediary; the state or fact of serving as an intermediate agent, a means of action, or a medium of transmission; instrumentality” (“Mediation” 1989). Focusing on a techno-social level, Silverstone (2006) provides the following definition: “Mediation refers to what media do, and to what we do with the media. It is a term that defines the media [...] as actively creating a symbolic and cultural space in which meanings are created and communicated beyond the constraints of the face to face [...] Readers, viewers and audiences are part of this process of mediation, because they continue the work of the media in the ways they respond to, extend and further communicate what they see and hear on the world’s multitude of screens and speakers.”

1.4. Digital, Digitization, and Digitalization

1.4.1. Digital as Discreet Encoding, as a 'Way of Being', as Hegemony

Print books and digital computers both use digital and analogue modes of representation, but they mobilize the two modes differently (Hayles 2004).

The use of the word 'digital' is not without issues. Strictly speaking, digital "simply means that something is divided into discrete, countable units — countable using whatever system one chooses, whether zeroes and ones, decimal numbers, tally marks on a scrap of paper, or the fingers (digits) of one's hand" (Cramer 2014). This means that digital information doesn't need to be stored or displayed on a computer or on any electronic device.²⁶ To be more specific, even electronic computers cannot be technically considered digital devices since the electricity that powers them is an analogue flow as well as the output on the screen. According to Katherine Hayles (2004), "digital computers have an Oreo cookie-like structure with an analogue bottom, a frothy digital middle, and an analogue top".

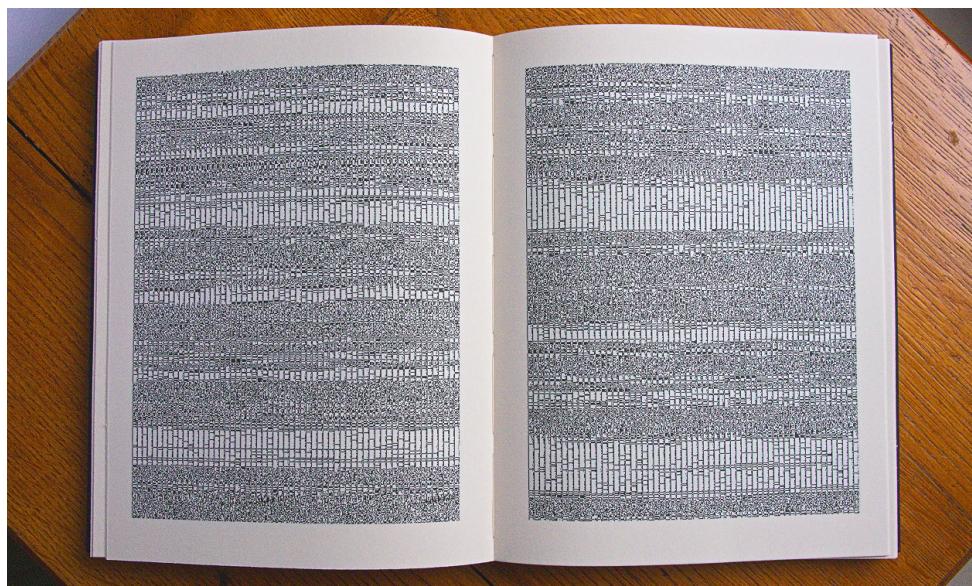


Fig. 5: Spread from the *Skor Codex* by La Société Anonyme.

That said, the term is generally used to indicate networked electronic devices or even the changes in lifestyle and cognition provided by those devices, epitomized by Nicolas Negroponte's book *Being Digital*. Digital often means hi-tech, it equals the innovations and disruption *indirectly*, and not entirely provoked, by the use of networked computers. In this sense it becomes a sort of hegemonic paradigm able to define any current phenomenon. This

26 The *Skor Codex*, a book made in 2012 by La Société Anonyme, well exemplifies this, since it "contains binary encoded image and sound files selected to portray the diversity of life and culture at the Foundation for Art and Public Domain (SKOR) [...]."

hegemonic condition makes ‘digiality’ hard to be specifically and clearly indicated. A process that becomes even more complicated in the field of publishing since “the very pervasiveness and generality of the technology make it difficult to identify any single digital *ceci*” (Nunberg 1996).

1.4.2. Digitization and Digitalization of Publishing: Some Significant Episodes

The affordance of a computer — the thing it’s designed to do — is to slice-and-dice collections of bits. The affordance of the Internet is to move bits at very high speed around the world at little-to-no cost. It follows from this that the center of the ebook experience is going to involve slicing and dicing text and sending it around (Doctorow 2004).

In this section, I discuss some episodes that exemplify the way in which digital technology has a role in transforming publishing. Making a selection of these and contextualizing them is not a trivial task. As Ted Striphas (2003) affirms, historical accounts in which technology seems to be created in a vacuum “downplay or displace [...] the social, economic and cultural determinations that bear upon the emergence of specific technologies, by privileging the inventor as their sole progenitor”.

Striphas also points out another risk concerning the production of histories of technology: these can enforce static, linear relationships. These easily become the dominant narrative of techno-evolution, often promoted by media outlets and marketing campaigns. In the case of ebooks, the dominant vision corresponds to the idea that the development of the ebook is mainly driven by the will to mimic and improve some aspects of the printed book: the ebook is seen as a more powerful type of codex. While such relationship is only one of the possible ways to look at the issue, it also hides some peculiarities of ebooks: for instance, the ease with which is possible to dissect, reorganize, and distribute them. Thus, there can be multiple histories of digital publishing: by combining the elements of a constellation of techno-social novelties a meaningful narrative can be built. To do so, I focus on episodes in which digital technology facilitated production, replication, and dissemination. In this sense, this brief genealogy is about the way digital technology interacts with publishing as a praxis. For each episode I consider two distinct processes: *digitization* and *digitalization*. To highlight the way in which these two processes are intertwined, I focus on four episodes: the ecosystem of 1960’s experimental magazines, the the advent of desktop publishing, the origins of Project Gutenberg (the first online library), and the evolution of the EPUB, the most used open standard for electronic publications.

DIGITIZATION VS DIGITALIZATION

Despite being often used as synonyms, *digitization* and *digitalization* can have two different meanings. Both terms are first used in relation to computers during the mid-1950s (Brennen and Kreiss 2014). According to the OED (“Digitization” 1989), digitization is “the action or process of digitizing; the conversion of analogue data (esp. in later use images, video, and text) into digital form”. Conversely, ‘digitalization’ can be seen as the process according to which certain social fields are “restructured around digital communication and media infrastructure” (Brennen and Kreiss 2014). The term ‘digitalization’ was firstly used in this con-

1.4. Digital, Digitization, and Digitalization

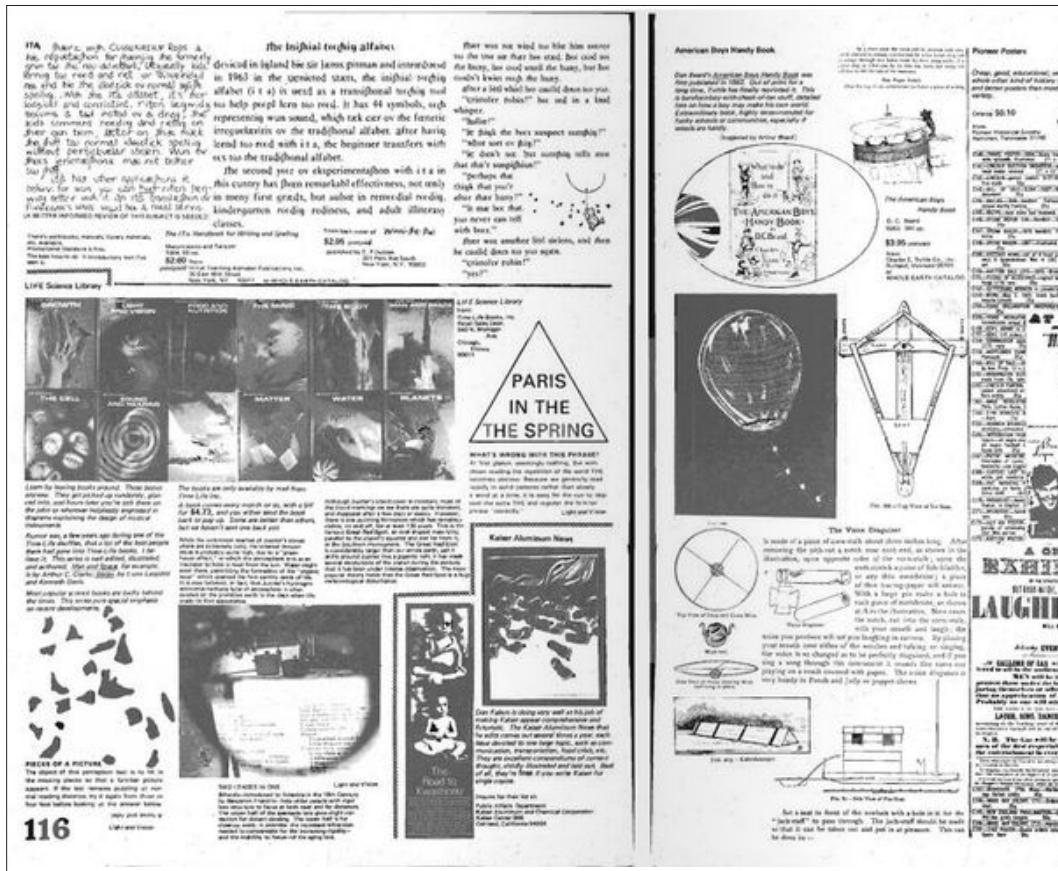
temporary meaning by Robert Wachal in 1974, while speaking of a “digitalization of society” (quoted in Brennen and Kreiss 2014). By looking at the evolution of publishing from the point of view of these two processes, we have the advantage of highlighting both direct and indirect effects. Thus, diverse phenomena, such as underground publishing informed by cybernetic theory or the digitization of physical books, can be included and compared.

TANGIBLE NETWORKS: THE WHOLE EARTH CATALOGUE AND ASPEN

During the 1950s and the 1960s, some of ideas around cybernetics developed within the core of the academic-military-industrial complex — such as new models for collaborative practices, a rhetorical tool for connecting different disciplinary fields and even an encompassing reading of the Earth as a system of systems — were adopted by countercultural movements, which were at the same time refusing or even fighting against the technocratic bureaucracy. The systems theorist and inventor Buckminster Fuller became a key figure in the bridging of this two opposite worlds, because of his reinterpretation of cybernetics in ecological terms. He demanded for a host of “Comprehensive Designers”, scientists able to exceed their disciplinary boundaries and act according to a global vision of the “Spaceship Earth”. The role of technology, even the one developed by hierarchical powers, was supposed to be considered as a tool for social transformation. Meanwhile, art collectives such USCO (The Company of Us) were employing projectors, stroboscopes, and other devices in their happenings, mixing technology and mysticism. Another group called the Merry Pranksters, whose mentor was the writer Ken Kesey, referred to cybernetics through collective experiences, often induced by LSD.

A young biologist called Stewart Brand was both member of the Merry Pranksters and in close contact with USCO; he deeply studied systems theory and refused the Cold War's hyper-rational atmosphere. Stewart Brand was profoundly fascinated by technology but at the same time he visited the Indian reservations and the counterculture's communes based in rural areas where a collective and horizontal way of life was experimented. These experiences led him to think of a way to provide access to the necessary tools necessary for communal living, but also to expand subjectivity through knowledge. Brand's notion of tool was therefore very wide: small-scale technologies, books, manuals, accessories. In his view, technology and information were means to reshape one's life and the world around.

He addressed these issues with a small-scale technology in itself: The *Whole Earth Catalog*, a printed catalog published for the first time in 1968. The Catalog soon became widespread and over its last issue in '72, it listed more than a thousand items. Through the Catalog's pages, the different networks whose Brand was part were ideally connected: cybernetics found place next to ecology; tents and clothes shared the page with calculators. The Catalog itself was designed according to systems theory, in fact each of the seven main categories (Understanding Whole Systems, Shelter and Land Use, Industry and Craft, Communications, Community, Nomadics, Learning) had the same importance and space. The Catalog's layout favored a non-linear fruition so that the reader could find his own path through the pages since, as it was declared in the first issue, “We can't put it together, it is together”. The editorial process also reflected systems theory through a non-hierarchical structure: readers could review tools and share their experiences with those. In this sense Brand set the initial conditions for what should function as an open and self-sustaining system.

Fig. 6: Detail of a spread from *The Whole Earth Catalog*.

The 1971 *Last Whole Earth Catalog* ends with the sentence "Stay Hungry, Stay Foolish". Recently this motto became very popular because it was quoted by Steve Jobs during his commencement speech at Stanford in 2005. Steve Jobs (2005) described the WEC as "a sort of like Google in paperback form, 35 years before Google came along". Likewise Kevin Kelly (2009), executive director of Wired, who was directly involved with the Catalog, referred to it as an early example of user-generated content and a precursor of the blogosphere. Kelly also claimed that the decline of the Catalog corresponding to the raise of the Web was no coincidence.

The Whole Earth Catalog was an enlightening form for building network and community, and a device to grasp the tangle of informations in order to find relevant materials. It was informed by cybernetics but also by low-tech and DIY. Nowadays the most valuable aspect of the Catalog's experience is its autonomy. Building a network outside of mainstream circuits becomes crucial when a form of independence is necessary. The Catalog is also strongly related to the archive as an active practice. New meanings and relationships are defined by a conscious and dialogical cataloging. This cataloging of tools in a broad sense corresponds to an appropriation. In this way a new perspective is built and consequently a different set of values is established. From this point of view the networked classification has a profoundly ethical meaning. As Ludovico (2012, 43) points out, within the *Whole Earth Catalog*, "the level of interaction and involvement between publisher and users/readers was unusually high; this 'tool' was a networked one, used for unveiling and sharing important information, and allowing people to change their relationship with their personal and social environments."

1.4. Digital, Digitization, and Digitalization



Fig. 7: An issue of *Aspen* magazine.

The Whole Earth catalog wasn't the only experimental magazine able to anticipate some of the aspect of networked digital technology. Another example was *Aspen*, first issued in 1965 by Phyllis Johnson. *Aspen*'s aim was to "to get away from the bound magazine format, which is really quite restrictive" (Stafford). In order to do so, the magazine was unbound: each issue had the form of a box filled with booklets, phonograph recordings, posters, postcards, etc. In this sense, *Aspen* can be considered an early multimedia magazine. Issue 4, designed by Quentin Fiore, included several contribution by Marshall McLuhan. Another interesting anticipation of digital practices is the *Underground Press Syndicate*, a network of newspapers in which each one had the right to copy and reproduce the content of other magazines in the network (Ludovico 2012, 43). This set of rules fostered a wide dissemination of content.

After almost half of a century, the networked features of printed matter are being rediscovered. Muller and Ludovico (2008, 10) speak of the value of publishing on paper as a 'gesture' "that creates a space of intimacy between the publisher/editor and the reader. This space of intimacy is definitely a 'physical' one." They define gesture as "located between the realm of discourse and the material act. A gesture is something preceding the action, and therefore signifies motion and agency of the most expressive and potent kind, precisely because it is so wrought with intentionality." Florian Cramer (2013, 39) argues that this renaissance of print books and magazines might have to do with avoiding surveillance and control: "print — from texts to non-electronic money and transportation tickets — may gain new importance because it's partly off the digital surveillance radar".

THE ADVENT OF DESKTOP PUBLISHING

Desktop Publishing can be seen as a generic label that refers to an innovative combination of hardware, software, and standards having a profound impact on the production, editing, and

printing of documents through computers. Before the advent of PostScript language, there were many competing proprietary systems meant to manage the different elements of a page through often cumbersome workflows, characterized by manual operations and by limited font libraries. Printers were 'dumb', in the sense they were only able to print lines of text. This resulted in very expensive and inefficient processes.

In 1984 the first release of the PostScript language, "a device-independent page description language", was authored by John Warnock, Charles Geschke, Doug Brotz, Ed Taft, and Bill Paxton at Adobe ("PostScript turns 20", 1). PostScript allowed the description of rich page content independently from the final software and hardware employed. In a promotional leaflet, Adobe apologetically states that "the introduction of PostScript freed printers and publishers from the constraints of proprietary output systems — setting the stage for a revolution in 'open' system development, unrestrained content and type library creation, and independent publishing" ("PostScript turns 20", 1).

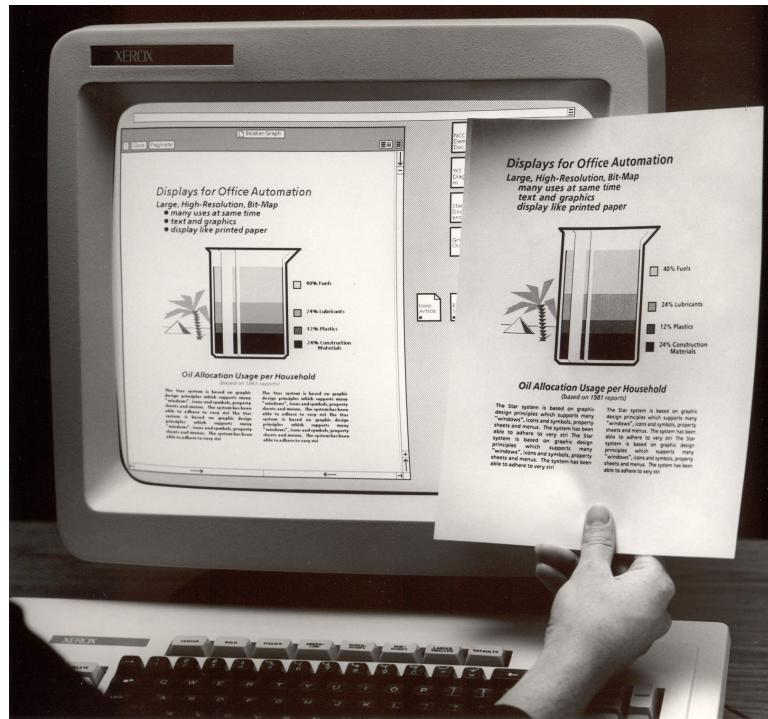


Fig. 8: Early WYSIWYG interface of the Xerox Star 8010, 1981.

PostScript was soon adopted as the standard method to let communicate the Macintosh computer, released by Apple and introduced by its CEO Steve Jobs in 1984, with Apple Laser-Writer printer introduced in 1985. The price of this printer, even though was small compared to other competitors, was at the time prohibitive for personal use (about 7.000\$), so it was more common to print files in specialized copy shops. The Macintosh operating system was based on a What You See Is What You Get (WYSIWYG) interface that allowed to render the final document on the screen with a certain kind of precision. It could be also equipped with MacPublisher, the first Desktop Publishing program for the Apple Macintosh, developed by Robert Doyle and distributed by Boston Software Publishers.

1.4. Digital, Digitization, and Digitalization

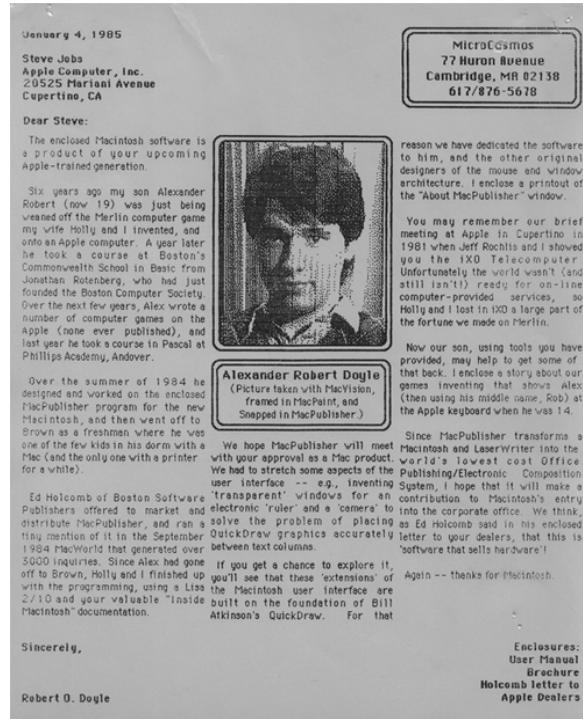


Fig. 9: Letter from Robert Doyle to Steve Jobs, 1985.

In the same year of Apple LaserWriter, a new page layout program was launched: Page Maker by Aldus Corporation, whose chairman, Paul Brainerd, coined the expression 'desktop publishing'. PageMaker was "part word processor, part graphics program, and more" (Pfiffner 2003, 49). It represented the 'killer app' that popularized the Desktop Publishing vision.

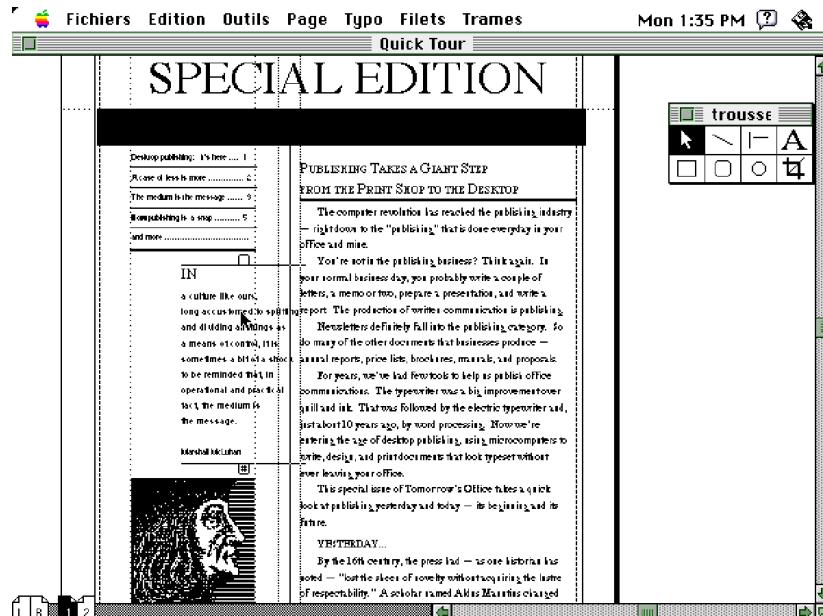


Fig. 10: Aldus PageMaker.

Alessandro Ludovico (2012, 47) summarizes the DTP revolution in the following words: “Starting in the late 1980s, anyone could purchase Desktop Publishing (DTP) software in computer shops; from now on, simply owning a personal computer and a printer meant potentially having all the means of production in one’s own home. Amateurs (often referred to as the ‘bedroom generation’) could now produce printed materials in their own personal environment. At the same time, new digital storage media were being introduced, such as the floppy disk, which was cheap and compact and could carry a reasonable amount of data.” In this sense, the main effect of Desktop Publishing was to provide a great level of disintermediation on the digital publishing processes. Bhaskar (2013), on the contrary, reduces the value of DTP by saying that it is the proof that digitization and dematerialization are not sufficient to “disrupt” publishing; to do so digital networks are required.

PROJECT GUTENBERG

Even though the origin of ebooks is somewhat contested²⁷, it is possible to refer to a precise date: the fourth of July 1971. During that day — or, more specifically, night, Michael S. Hart, at the time a Human-Machine Interfaces’ student at the University of Illinois, used his time available at the mainframe computer of his university (time that was worth millions of dollars) to retype and publicly distribute the text of the *United States Declaration of Independence*. At a time in which computers were mainly used for data processing, employing them for text distribution was not an obvious choice. In Hart’s (1992) words “the greatest value created by computers would not be computing, but would be the storage, retrieval, and searching of what was stored in our libraries”.



Fig. 11: Xerox Sigma V mainframe computer.

27 The first candidate in chronological order to be considered the original ebook is a reading machine envisioned by writer Bob Brown in the 1930’s but never fully realized (Thomas 2012).

1.4. Digital, Digitization, and Digitalization

Michael Hart was profoundly conscious of the duplicating potential of computers, called by him a form of “replicator technology”. This concept, together with the adoption of “Plain Vanilla ASCII”, a universally interchangeable standard for text, led to the development of Project Gutenberg, a volunteer-based platform whose mission is to “encourage the creation and distribution of eBooks” (Hart 2004). All the books on Project Gutenberg are released in the public domain and freely available for download. At the time of writing, the books are released in several formats such as HTML, EPUB, PDF, and MOBI, a proprietary format read by Kindle devices.

The historical account of the first ebook shows how digital technology has a strong influences on publishing specifically in terms of distribution and survival. Michael Hart understood computers’ *amplification* potential and took advantage of it. In this sense, the fact that the first ebook was already published in print is telling. The story can also be seen differently: a mentality influenced by notion of *frames* and *amplification* can assign a peculiar role to digital technology. In other words, “the first e-book, unsurprisingly, was a product of the usual early hacker spirit” (Ludovico 2012, 84).

EBOOKS: ORIGINS, DEFINITIONS, EPUB FORMAT

Ebook is an ambiguous term, often incarnating very different perspectives on digital publishing. The discussion revolves around a series of questions such as: is it an ebook only if it's read on a e-reading device? is the ebook the publication file or the device? is any text file an ebook? etc.²⁸ A definition even includes Print on Demand volumes (Hawkins 2000), which highlights a point made by Bhaskar (2013, 42) echoing Hayles (2007):

the ebook is only the culmination of changes in the publishing workflow since the 1980s — books only become print at a late stage in the publication process. Most of the actual work on them already takes place in digital forms.

This remark is valuable because it points to both process of digitization (e.g. digital printing files like PDF) and digitalization (e.g. effects on the role of printed book).

According to Cory Doctorow (2004), in the early days of digital publishing the word ‘ebook’ had a double meaning:

One meaning for that word is ‘legitimate’ ebook ventures, that is to say, rightsholder-authorized editions of the texts of books, released in a proprietary, use-restricted format, sometimes for use on a general-purpose PC and sometimes for use on a special-purpose hardware device like the nuvoMedia Rocketbook. The other meaning for ebook is a “pirate” or unauthorized electronic edition of a book, usually made by cutting the binding off of a book and scanning it a page at a time, then running the resulting bitmaps through an optical character recognition app to convert them into ASCII text, to be cleaned up by hand.

²⁸ For a comprehensive overview of the debate around the defining features of an ebook, see (Roncaglia 2010).

Nowadays, EPUB is most widespread open standard of ebook formats. Originally developed between 1998 and 1999 by the OeBF (Open Ebook Forum), which afterwards became the IDPF (International Digital Publishing Forum): a group of devices producers, reading softwares, publishers, distributors, library associations, and experts of the field. They initially developed the OEB (Open ebook publication standard) which became EPUB in 2007.

EPUB 2.0 is based on XHTML, an XML-oriented mark-up language. The format is a compressed file containing a text, its structure (table of contents, order, etc), its metadata (title, authors, publishing house, etc.), and the way it should be displayed. Even though the EPUB was meant to be an output format employed by final users, it provides the foundation for other formats, also proprietary, like LIT, Mobipocket, and Amazon .azw. EPUB3, introduced in 2011, supports HTML5 instead of XHTML. Furthermore, it has support for CSS3 styling (therefore animations and more complex layouts), scripting in JavaScript which leads to the development of dynamic applications within single books and an easier embedding of audio and video files.

One of EPUB's main features is 'reflowability': it allows the text to fluidly adapt to different screens and devices. This features can go along with fixed-layout which adds custom specifications to define precisely the look of an ebook for a specific screen size. In fact, "a key concept of EPUB is that content presentation should adapt to the User rather than the User having to adapt to a particular presentation of content" (International Digital Publishing Forum 2011). The fact that the EPUB is so easy to unzip fosters an idea of remix and curation of text. It can also propel the birth of new publishing formats. As an example, the online version of the Italian Treccani encyclopedia, currently allows to download single voices as ebooks in EPUB format²⁹.

As opposed to PDF, which doesn't allow an easy access to its informations and the underlying structure, EPUB can easily become an source format that can allow to automatically produce new organization of contents. Programming libraries, such as EbookLib for python (James, 2014), make such tasks easier. The EPUB is also suitable as a format for preserving Web content: sharing a subset of the same markup language and style definitions, EPUB allows to make a website portable and distributable offline. Therefore, "An EPUB file can be seen as a self-contained website with some metadata files, packed together in a zip archive" (Digital Publishing Toolkit Collective 2014).

29 E.g. [http://www.treccani.it/enciclopedia/multimedialita_\(Enciclopedia-Italiana\)/](http://www.treccani.it/enciclopedia/multimedialita_(Enciclopedia-Italiana)/).

2. Experimental Publishing and Its Trading Zones

2.1. Influential Perspectives and Communities of Practice

Some [communities of practice] are quite small; some are very large, often with a core group and many peripheral members. Some are local and some cover the globe. Some meet mainly face-to-face, some mostly online. Some are within an organization and some include members from various organizations. Some are formally recognized, often supported with a budget; and some are completely informal and even invisible (Wenger 2007, 3).

In this chapter I describe a series of influential perspective that inform the practice of experimental publishing and I provide an overview of the ‘communities of practice’ in which it happens. Deriving mostly from art criticism and media studies, these perspectives are able to debunk some of the myths discussed in the previous chapter and, in doing so, they reframe the discourse around the media, devices, and platforms that play a role in the publishing ecosystem.

The concept of community of practice was introduced in 1991 by anthropologist Jean Lave and computer scientist Etienne Wenger to indicate “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger 2007, 1). Communities of practice do not need to share the same physical space or interact on a daily basis; instead they can use networks to communicate at a changing pace. Grounded in Pierce’s concept of ‘community of inquiry’ (Shields 2003), communities of practices are fluid and informal — sometimes even unintentional — structures for learning through practice and participation, that are commonly found in many social contexts, such as the educational, artistic, or professional one. Communities of practice revolve around three main aspects: domain, community, and practice (Wenger 2007, 1-2). The domain is the shared field of interest that defines the identity of the community. Competence in this domain, which is not necessarily recognized outside of the community as expertise, is what allows and regulates membership. The community aspect is also crucial: members need to “engage in joint activities and discussions, help each other, and share information”. Finally, members of communities of practice are practitioners who build and make use of “a shared repertoire of resources [comprising] experiences, stories, tools, ways of addressing recurring problems.”

The radical aspect of communities of practice is the fact that they refuse the assumption that that learning is an individual process, it has a beginning and an end, and is the result of teaching (Smith 2003). Within communities of practice, the social relationships that are built are part of the learning process and, at the same time, are a result of this learning experience: “This social process, includes, indeed it subsumes, the learning of knowledgeable skills” (Lave and Wenger 1991, 29). That’s why participation is crucial. Participation is intended as “not just to local events of engagement in certain activities with certain people, but to a more

encompassing process of being active participants in the practices of social communities and constructing identities in relation to these communities' (Wenger 1999, 4). The concept of community of practice is particularly appropriate to identify fields in which artistic and design strategies play a crucial role but are often employed in a subliminal way. Paradoxically, within this contexts the impact of design is wider then within the 'traditional' publishing sector, as it has to deal with the processual and social needs of experimental publishing, which are not limited to the configuration of a single final artifact, but they include as well the social relationships between participants in the process, be they authors or users.

2.2. Influential Perspectives

2.2.1. Intermedia, Remediation, Reversed Remediation, Intermediation — Respect and Rivalry between Media

INTERMEDIA

The term intermedia was popularized by Dick Higgins, a British artist and publisher who worked mainly in the United States. Higgins was also the founder of *Something Else* Press, a publishing house focused on experimental works including concrete poetry, modernist literature, artists' books, and printed matter produced by Fluxus' members. As Higgins (1981) himself pointed out, the term 'intermedia' was coined by Samuel Taylor Coleridge. In his 1812 writings, he used the term with the exact contemporary sense which Higgins attributed to it: a way to define "works which fall conceptually between media that are already known".

Even though Higgins had employed the term for some time in his lectures, its first appearance in a published text was in the *Something Else Newsletter* of 1966, printed in 10.000 copies and distributed with the encouragement to reproduce it. In this text, he maintains that most of the current artworks "seems to fall between media" (Higgins 1966). His understanding of media was very inclusive, taking into account painting as a medium as well as life. One specific example he provides is visual poetry "as intermedium between poetry and sculpture". Another significant intermedium which Higgins took into account was the one between literature and computers. In fact, he was an early investigator of it: Higgins collaborated with musician and programmer James Tenney to produce a generative poem titled "hankand mary, a love story, a chorale for diter rot". Written in programming language Fortran IV, the poem is a four-column permutation of the four words "hank," "shot," "mary," and "dead" (Smith).

Higgins later highlighted the critical value of an "intermedial approach", by stating that "We must find the ways to say what has to be said in the light of our new means of communicating" (Higgins 1966). But, in doing this, he also made the remark that "intermedia" is a temporary category and soon enough intermedia works become simply media. Therefore, such category happens to become an impediment to a deeper analysis of the work (Higgins 1984).

2.2. Influential Perspectives

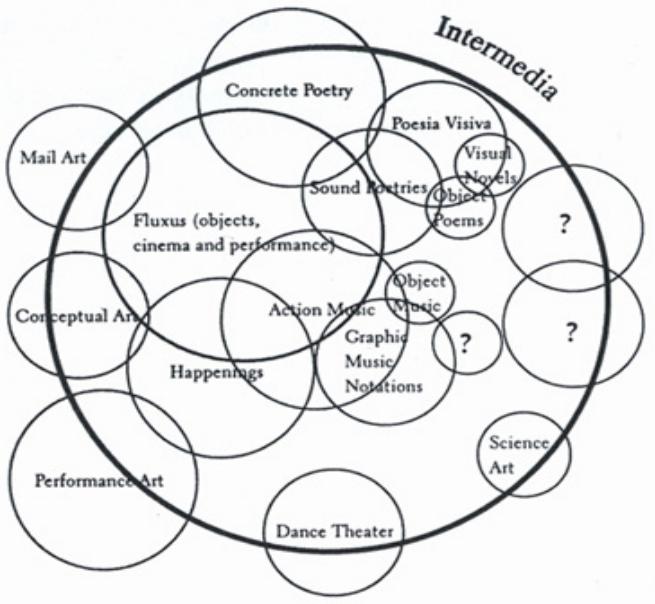


Fig. 1: Intermedia Chart by Dick Higgins, 1995.

REMEDIATION

Remediation is a concept proposed by scholars Jay David Bolter and Richard Grusin (1999, 45) to express “the representation of one medium in another”. Such process, in no way specific to digital media, is guided by two apparently antithetical logics: immediacy and hypermediacy. Immediacy is the tendency of media to be transparent, according to which they try to erase themselves in order to represent content in a supposedly unmediated way. The logic of hypermediacy tends to make the media employed opaque and to make the mediation process visible, and by doing so, it makes the medium part of the content itself. Furthermore, hypermediacy has the bigger goal of providing a genuine experience of a medium and a more direct involvement with it, through the multiplicity of its representations. Thus, immediacy depends on hypermediacy. In other words, “Our culture wants both to multiply its media and to erase all traces of mediation: ideally, it wants to erase its media in the very act of multiplying them” (Bolter and Grusin 1999, 5). Example of immediacy are the linear perspective and the *trompe-l'œil*, while examples of hypermediacy are the medieval churches or the windowed computer screens.

There are several ways in which remediation takes place: an older medium can be represented within a new one without intrinsically critiquing it; the new medium can configure itself based on the difference between itself and its predecessor which is generally seen as an improvement¹; the old medium can be refashioned entirely; or the new medium can wholly absorb the old medium in a new environment in which the latter plays only a single part.

1 To exemplify this typology of remediation, the authors refer to the Voyager Company, whose ebooks were presented as an improvement of printed books (Bolter and Grusin 1999, 46).

Bolter and Grusin (1999, 65) offer a simple definition of medium:

A medium is that which remediates. It is that which appropriates the techniques, forms, and social significance of other media and attempts to rival or refashion them in the name of the real. A medium in our culture can never operate in isolation, because it must enter into relationships of respect and rivalry with other media.

Thus, media are not simply composed by their technical apparatus but they have to be interpreted at large. They “constitute networks or hybrids that can be expressed in physical, social, aesthetic, and economic terms.” Given the fact that any act of mediation is dependent on a previous one, the scholars argue that “all mediation is remediation” (Bolter and Grusin 1999, 55). Such process acts in two directions: while new media show themselves in relationship to older media, the latter need to be reconfigured in order to maintain their status in the medial landscape. The tendency of remediation to both reform the previous context by improving a medium and offer a more immediate experience can be read as a different way to articulate the myth of ‘supersession’ and ‘liberation’ pointed out by Paul Duguid (cfr. 1.1). Bolter (2001) specifically focuses on electronic writing by saying that “The best way to understand [it] today is to see it as the remediation of printed text, with its claim to refashion the presentation and status of alphabetic writing itself.

REVERSED REMEDIATION

Drawing from the notion of remediation, Saskia Korsten (2010) indicates “reversed remediation” as an aesthetic strategy able to escape the ‘narcotic state’ of the user of a medium. Reversed remediation “creates a state of critical awareness about how media shape one’s perception of the world.” Reversed remediation employs the logic of hypermediacy to “display the incongruities between media and to frustrate immersion and fosters critical awareness” (Korsten 2010). In this sense, reverse remediation breaks the ‘transparency spell’ and interrupts the desire for immediacy: “Reversed remediation thus can be explained as a strategy that purposely makes media visible by displaying its characteristics in order to raise the awareness of the workings of the media employed.”²

INTERMEDIATION

Finally, ‘intermediation’ is a term that Ted Striphias (2011, 15) borrowed from Charles R. Acland “to describe the complex relations that media share in determinate historical conjunctures.” Intermediation is different from both Higgins’ ‘intermedia’ and Bolter and Grusin’s ‘remediation’: intermediation doesn’t address a typology of artwork and the relationships it indicates “exceed” the re-medial ones. Intermediation is a perspective based on the following three propositions:

2 Similarly, the process called flip-flop by Robin Sloan (2012) — “the process of pushing a work of art or craft from the physical world to the digital world and back again—maybe more than once” — may serve the purpose of highlighting the seamless workings of specific media by displacing them.

2.2. Influential Perspectives

1. media shouldn't be isolated analytically from one another;
2. the relationships among media are socially produced and historically contingent rather than given and necessary;
3. media rarely if ever share one-dimensional, causal relationships.

Striphias also suggests some of the types of discursive relationships that can be taken into deep account such as formal, functional, augmentative, instrumental, adaptive, organizational, and social-contextual. These three notions facilitate an understanding of the multiple and reciprocal relationships among media. When applied to the field of publishing, it becomes easier to extend the focus that is generally addressed only to books and printed matter. Also, through the notions of 'reversed remediation' and 'intermediations', the relationships between media shift from being a matter of fact to becoming a matter of concern. While intermediation is a mode of interpretation of these relationships, reversed remediation can be a pragmatic strategy to reveal their 'constructedness' at multiple levels.

2.2.2. Media-Specific Analysis, Technotexts, and Performative Materiality — Processes Instead of Objects

Like the creator of an artist's book who manipulates an Exacto knife to make delicate cutouts in heavy white Italia paper and painstakingly sews the pages together, the writer of an electronic text is intensely aware of the entwining of intellectual, physical, and technological labor that creates the text as a material object (Hayles 2004, 81).

MEDIA-SPECIFIC ANALYSIS AND TECHNOTEXTS

Discussing the way literary analysis tends to focus only on the immaterial aspects of literature, scholar N. Katherine Hayles (2004) advocates for a deeper attention to the material aspects of texts. According to Hayles, the materiality of a text always contributes to the construction of meaning, therefore fields like artists' books and concrete poetry are not exceptions but paradigmatic examples of how literary texts function. She defines materiality as "the interplay between a text's physical characteristics and its signifying strategies" (Hayles 2004, 72). This definition is not meant to suggest that the materiality of a text automatically and autonomously produces produces an *a priori* meaning, but instead it influences the act of interpretation performed by the reader/user.

Hayles calls her approach media-specific analysis (MSA). Referring to Bolter and Grusin' remediation (1999), she acknowledge the intertwined nature of media, but nonetheless she suggests that they can be artificially isolated in order to highlight some of their specific features:

The power of MSA comes from holding one term constant across media [...] and then varying the media to explore how medium-specific constraints and possibilities shape texts (Hayles 2004, 69).

Hayles also maintains that materiality interacts with a series of practices ("linguistic, rhetoric, and literary") to produce meaning. In this sense, she confirms the necessity for a wide understanding of media, that is not limited to their technical apparatus. Furthermore, not every

material feature of the work needs to be considered when analyzing a work: in different cases, different aspects of materiality will emerge. Hayles employs the genre of hypertext literature as a test ground for MSA. In order to do this, she proposes three necessary features of hypertext:

- multiple reading paths;
- some kind of linking mechanism;
- chunked text.

Considering these characteristics, it becomes apparent that hypertext is not specific to electronic media. Hayles also suggests that “an electronic text is a *process* rather than an *object*” (2004). Even though every text is influenced by its material form, Hayles indicates some kind of texts in which the interaction between text and materiality becomes a strategy openly employed by the author. Thus, a technotext is a “literary work that interrogate the inscription technology that produces it, it mobilizes reflective loops between its imaginative world and the material apparatus embodying that creation as a physical presence” (Hayles 2002, 25). In-scription technologies provoke material changes that can be read as marks, therefore the book, the fax, and the computer can be considered such. The notion of technotext is particularly useful to this research, since many of the case studies explored in the third chapter express a reflection on their material embodiments. Technotexts are different from both hypertexts and cybertexts — a definition provided by Espen Aarseth (1997) to indicate texts in which combinatorial strategies were employed — since none of them foregrounds the meta-reflection on its embodiment.

PERFORMATIVE MATERIALITY

In a 2013 essay for the *Digital Humanities Quarterly*, Johanna Drucker (2013) provides the basis for a theory of what she calls “performative materiality,” defined as “the enacted and event-based character of digital activity” supported by the literal, physical, and networked qualities of digital artifacts. Drucker’s notion of performative materiality is grounded in both the growing discussions on materiality of digital media and the ideas of materiality and media specificity that come from critical theory and aesthetics.

An important distinction that allows to overcome the allegedly *immaterial* nature of electronic technology, is provided by Matt Kirschenbaum (2008). He distinguished between *forensic* and *formal* materiality, being the former the “evidence” of an artifacts — such as ink or paper in a book, while the latter refers “to the codes and structures of human expression”. While confirming the usefulness of such categorization, Drucker (2013) points to its essential ontological approach and suggests a shift towards performance: “a system should be understood by what it does, not only how it is structured.” Jean François Blanchette’s “distributed materiality”, meant to describe “the codependent, layered contingencies on which the functions of drive, storage, software, hardware, systems, and networks depend” (Drucker 2013), adds to the fact that digital artifacts are material, the fact that those are connected and they influence each other. The perspective of New Criticism reminds us the performative element since it acknowledges the fact that “every reading produces a text anew, therefore the production of a text is the fundamental work of reading”. From this point of view, not dissimilar from Hayles’ one, the material substrates are only able to provide a guideline, and are therefore in a “probabilistic”

2.2. Influential Perspectives

relationship with the production of meaning: materiality provokes the performance that, in turn, produces an interpretation.

Performative materiality tightly connects to the diverse life cycles of artifacts, such as “production, use, control, resource consumption, labor, cost, environmental impact and so on — so that an artifact’s materiality is read as a snapshot moment within continuous interdependent systems” (Drucker 2013). Drucker’s argument also denies the usefulness of approaches in which materiality is understood in a *literal way* — that often happens when speaking of media specificity, where materiality is considered as a direct and autonomous producer of meaning according to some universal values related to the features of the artifact.

Exploring how this approach can be applied to the field of digital humanities, Drucker reflects on the “latent potential in interface design”. The concept of interface itself is extended by a performative perspective: according to Drucker, an interface is not an object and equally is not a constitutive element of digital artifacts only. For example, a book is an interface, since it’s a “device in which human actions have to be mediated in and through a space of exchange.” She continues:

Interface is a space of affordances and possibilities structured into organization for use. An interface is a set of conditions, structured relations, that allow certain behaviors, actions, readings, events to occur (Drucker 2013).³

2.2.3. Post-digital — Beyond Digitality as an Ideology

The term “post-digital” was coined by composer Kim Cascone in his essay “The Aesthetics of Failure: ‘Post-digital’ Tendencies in Contemporary Computer Music”. According to Cascone (2000, 393), “the revolutionary period of the digital information age has surely passed. The tendrils of digital technology have in some way touched everyone.” His main reference was Nicholas Negroponte (1998), who stated that “the digital revolution is over [and soon] like air and drinking water, being digital will be noticed only by its absence, not its presence.” Both Negroponte and Cascone recognized the fact that, at least in the first world, digital technology is an integral part of our everyday life and it is consequently taken for granted. In this sense the very attribute ‘digital’ becomes meaningless, as almost every artifact we currently deal with is produced, distributed, mediated, or at least affected by digital means. Cascone’s (2000, 394) notion of post-digital was tightly bound to ‘glitch’ movement, an aesthetics rooted in a practice that goes “beyond the boundary of ‘normal’ functions and uses of software”, through “experimentation rather than empirical investigation”.

Alessandro Ludovico (2012) borrowed the term ‘post-digital’ for the title of a book in which he systematically documents the way in which in the last century, “avant-garde artists, activists and technologists have been anticipating the development of networked and electronic publishing.” Ludovico’s book was an experiment in hybrid publishing in itself, since it was distributed both by the means of a traditional publishing house, but also as a free PDF on

³ From this perspective, Malik’s “horizons of the publishable” can be seen as interfaces (cfr. 1.2.2).

the underground book-sharing platform AAAAARG⁴. In his afterword to Ludovico's book, Florian Cramer (2012a) reflects on the current booming of print zines and artists' books. Making a distinction between book and print — the former being "a symbolic form" in Ernst Cassirer's terms, while the latter being a medium in the most literal sense: a physical carrier of information, Cramer sees this booming not only as a retro-trend driven by nostalgia but also as a way to question the hegemony of digital means on almost every mode of human communication.

While the field of publishing hasn't yet profoundly undergone the radical mutations implied by digital technology, neo-analog means of production, such as the risograph or letterpress printing (and the style that characterizes them) are restored both by independents artists or designers and big publishers because "they compensate for deficiencies of digital files — deficiencies that are both aesthetic and social, since tangible media are means of face-to-face interpersonal exchange" (Cramer 2013b). Cramer also suggests some of the features that should characterize print in order to be post-digital. Post-digital print should be hybrid, thus including "networked community sharing which is both local/tangible and global/digital" (Cramer 2012a, 165). Trying to extend his perspective to a more comprehensive notion of "post-digital aesthetics", he argues that it should be:

an aesthetics in which 'digital' is (a) no longer associated with a break with previous culture although the change it brought — such as unrestrained replicability of information — is embraced, (b) seen as having no value of its own, including no particular association with technological or social progress, (c) used as a convenience but typically associated with aesthetic shortcomings, (d) avoided in the perceivable work but implicitly present as a tool of its creation or as a tacit or negative reference; or it is hybridized with pre-digital media technology. Instead of such digital or 'new media' core values as computability, reproducibility and the "global village", post-digital aesthetics emphasizes tangibility, do-it-yourself and urban locality (Cramer 2013a, 42).

Since digital technology is not directly identified with progress, the post-digital attitude also questions the very distinction between 'old' and 'new' media. But — as Cramer (2014) warns — employing a retro technology is not enough since "there is a qualitative difference between simply using superficial and stereotypical ready-made effects, and the thorough discipline and study required to make true 'vintage' media work, driven by a desire for non-formulaic aesthetics."

Of course the term 'post-digital' is not without issues. The most prominent has to do with the temporal dimension it suggests: post-digital as an age that comes *after* the digital one. This interpretation suggests a repetition of the route taken by the Luddite or the Arts and Crafts movement. Cramer (2014) provides an alternative interpretation where post-digital indicates a digitality in crisis, like post-modernity points to the wavering of the values of modernity. Cramer's point of view is echoed by Kristoffer Gansing and Siegfried Zielinski (2014), who both tend to generalize the post-digital attitude and to warn against the fact that post-digital tendencies have been already subsumed into dominant economic discourses. According to the former, post-digital is a way to develop a critical thinking about digital media, while the latter argues that:

4 Now <http://aaaaarg.fail/>.

2.2. Influential Perspectives

Working consciously ‘post-digital’ cannot mean to work without digitality. Digital tools, instruments and systems are surrounding us and are inherent for our cultural production and perception. To work beyond digitality — as an ideology and a hegemonic practice — means to reach beyond the glossy surface effects the digital is able to organise.

The ‘post-digital mindset’ therefore allows a more inclusive research framework of the publishing field, in which ebooks and book-apps aren’t the only object of study and where ‘old’ and ‘new’ media are not in a natural opposition. In the field of post-digital publishing, printed matter doesn’t belong to the past and digital tools are not inherently innovative. Designers and artists seamlessly shift between blogs and stapled zines — and more generally they “mix oil paint while Photoshopping and scour flea markets for vintage vinyl while listening to their iPods” (Goldsmith 2011, 226). The digital environment is at the same time a source of inspiration, a repository of raw data to filter and organize, a channel for collaboration or dissemination, a space for exposure, a mix of communication modes to exploit, a set of tools to tweak or to autonomously build.

2.3. Communities of Practice

2.3.1. Artists’ Books — Material Self-Reflexivity

[An artist’s book] interrogates the conceptual or material form of the book as part of its intention, thematic interests, or production activities (Drucker, 3).

There is no easy way to precisely define the boundaries of what can be called an artist’s book. This is because the field of artists’ books is at the intersection of different disciplines, fields, and ideas, but also because artists’ books tend to be self-conscious about the features that characterize ‘book-ness’ and they try to overcome them. ‘Boundedness’, linear sequence, standardized pages, the presence or absence of content, are all aspects that can be emphasized as well as negated in artists’ books. This self-consciousness often extends to the modes of book production and distribution; in fact, many book artists are involved or directly supervise each phase, sometimes mastering printing techniques such as offset, letterpress, but also xerox or mimeograph.

In *The Century of Artists’ Books*, book artist and historian Johanna Drucker (2004) provides the basis for a critical reading of the field by analyzing a phenomenology of case studies. According to Drucker (2004, 29), “artists’ books are almost always self-conscious about the structure and meaning of the book as a form”. Artists working with books materially and conceptually reflect upon the many things a book represents: a physical object, a metaphor to organize reality (the so-called book of nature), a symbol of authoritativeness, an accessible archive, a mass-produced commodity, and so on. The form of the book — “a dynamic interface, a structured set of codes for using and accessing information and navigating the experience of a work” (Drucker 2004, VII) — is therefore present (at least as an influence or reference) in screen-based artworks and in shaping portable electronic devices, from the laptop to the e-reader.

One idea that has profoundly affected the history of artists' books is the notion of 'democratic multiple'. Not free of contradiction, such vision sees the book as an inexpensive object easily accessible by the masses. This was particularly relevant during the post-World War II era as a means to escape the hierarchical and centralized structure of the gallery and the museum. The concept of the democratic multiple has been so influential that produced some 'myths' around what an artist's book need to be:

1. a book has to be inexpensive to be an artist's book;
2. it must be produced in small format, through commercial means;
3. democracy should reside in affordability rather than accessibility of content;
4. affordable to buy vs affordable to make. (Drucker 2004, 72).

As discussed in detail in 3.3, new digital means of production, such as Print on Demand, make this concept relevant again by directly realizing one of the above myths: the one about affordability of production and distribution.

Another useful category of an artist's book that can be applied to digitally-influenced experimental publishing is 'self-reflexivity'. According to Drucker (2004, 162), such inward-looking can be oriented at page level, at whole object level, or at level of production. Self-reflexivity becomes a relevant strategy when the production and distribution processes tend to be hidden by seamless presentation. Interpreted as such, self-reflectivity connects to another impulse that makes artists' books agents of social change, "agents of political persuasion or vehicles to advocate a change of consciousness or policy in some area of contemporary life." In this sense artists' books are useful analytical tools of the current condition of the book as a designed artifact, as a cultural object, and as a commodity. Finally, the book as conceptual space provides a space for activating the audience: "the goal of making the audience member a performer through the structure of the piece. One does not 'read' this work, but enacts it" (Drucker 2004, 311)⁵.

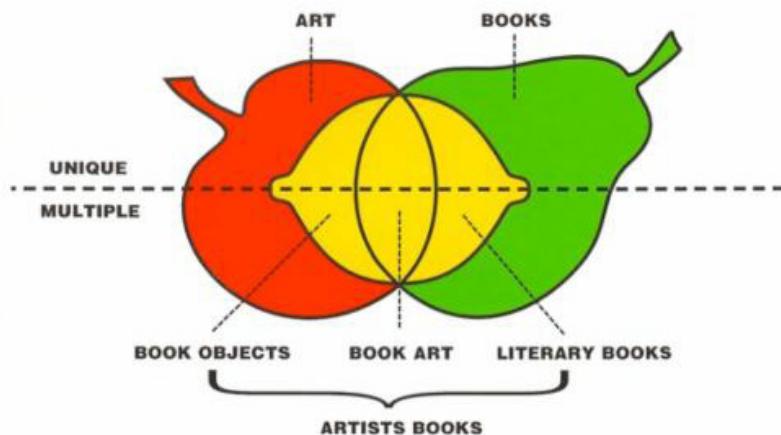


Fig. 2. 'Fruit Salad' diagram by Clive Phillpot.

⁵ Cfr. 3.4.

2.3. Communities of Practice

Furthermore, artists' books provide alternative reading models, often anti-functionalistic, since they are "books in which the book form, a coherent sequence of pages, determines conditions of reading that are intrinsic to the work" (Carrión 1980). The proposed models, more or less viable, often represent a radicalization of the technical aspects that affect the act of reading. In a seminal essay about books as artworks, art historian Germano Celant (1971, 31) defines the book as a "self-signifying" medium, referring to the fully blank book *Life and Works* by Piero Manzoni as a good example.

In order to identify artists' books, Clive Phillpot, another authoritative expert of artists' books, developed a series of diagrams, the last of which was called the 'fruit salad diagram'. Phillpot (2013, 46) is a supporter of the concept of 'democratic multiple' as a defining feature of artists' books, in fact he states that he sees "artists' book as books produced by the artist using mass-media production methods and in (theoretically) unlimited numbers". He was also a proposer, together with Carrión, of the word 'bookwork' instead of artist's books, to emphasize the medium-specificity of the artwork.

Drucker (2004, 14) doesn't exclude the possibility of electronic artists' books: "the book as an electronic form — whether in hypertext, CD-ROM, or as an infinite and continually mutating archive of collective memory and space — is already functioning as an extension of the artist's book form." Some of the possibilities suggested by Drucker for books in the electronic field are the following:

- book as archive, since electronic media offer both the detailed structure and extend the possibilities of navigation of physical ones;
- book as hypertext, a feature that is already present for instance in newspapers or magazines but is exploited more actively in electronic media;
- book as a field: "a floating matrix of information not linked by hierarchical diagrams or by story strings" experienced through a spatial metaphor (Drucker 2004, 155).

In this respect, Clive Phillpot (2013, 5) is more skeptical. In his perspective, "Electronic artists' books are another kettle of fish. I have seen glimmers of interesting phenomena, but I don't see that such works can still be books. Although they might, for example, mimic page-turning, this would not be **intrinsic to the new medium**."

In her M.A. thesis in Book and Digital Media Studies, Esmée de Heer (2012, 24) argues that "an artists' book can be considered as a digital artists' book when digital technology is used in the creation and consumption of the artists' book as an original work". As discussed in the next section, print can be seen as a different output of an electronic and digital process rather than a different medium, therefore it would be limiting to exclude all the works that are materialized through print.

2.3.2. E-Literature — The Electronic Text and Its Multiple Manifestations

The working definition of electronic literature (e-literature or e-lit) provided by the Electronic Literature Organization (ELO) encompasses "works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer"

("What Is E-Lit?"). Several genres can be seen as being part of this discipline such as, among others, hypertext fiction, kinetic poetry, novels in form of emails, SMS, messages of blogs, chatterbots.



Fig. 3: Electronic Literature Collection, volume 1, 2006. Screenshot.

The ELO, established in 1999 by Scott Rettberg, Robert Coover, and Jeff Ballowe, has at its core the promotion of the writing, publishing, and reading of literature in electronic media. One of the most prominent ELO's projects is the Electronic Literature Collection⁶, currently two volumes including more than one hundred works of electronic literature freely downloadable and readable online. Such collection can be seen as an incomplete canon of the field and a document of a specific moment in its history.

In her essay titled "Electronic Literature: What is it?", N. Katherine Hayles (2007) gives an account of the state of electronic literature addressing people who are new to the field. She claims the necessity of a peculiar set of critical practices meant to interpret the specificities of e-literature. Hayles maintains that, like print literature is deeply interwoven with the technology that carries it, similarly electronic literature cannot be separated from the technology with which it is produced, reproduced, and experienced. Electronic literature, according to the author, does not generally include print literature that has been digitized. On the opposite, electronic literature is "digital born": produced through a computer and meant to be reproduced on a computer.

Borrowing this notion from Peter Galison, Hayles sees e-literature as a "trading zone": a space in which different cultures like print literature and videogames fandom intersect. An import-

⁶ ELO Collection volume 1 (2006): <http://collection.eliterature.org/1/>, ELO Collection volume 2 (2011): <http://collection.eliterature.org/2/>.

2.3. Communities of Practice

ant point made by the author concerns the current state of print: considering the almost full digitization of the printing process, print can be seen as a peculiar output of a fully-digital process rather than a medium in itself. However, there is a specific difference between print and electronic text, having the latter the necessity to be the result of an execution to be experienced:

Unlike a print book, electronic text literally cannot be accessed without running the code. Critics and scholars of digital art and literature should therefore properly consider the source code to be part of the work, a position underscored by authors who embed in the code information or interpretive comments crucial to understanding the work (Hayles 2007).

While browsing the various genres of e-lit, Hayles mentions works that have multiple instantiations, both in print and on the computer. In such cases, the signifying material exponentially grow from the dialogue between instantiations⁷. This hybrid space seems to be one of the most proficuous to investigate, inasmuch as experimental publishing practices often tend to employ different supports. Also, in historical terms she mentions poet and critic Loss Pequeño Glazier, who believes that “electronic literature is best understood as a continuation of experimental print literature” (Hayles 2007). Hayles concludes her essay by positioning electronic literature not only as an artistic practice, but as “a site for negotiations” where different kind of experts meet and analyze the complexities of the socio-technical context and the mutation of digital practices.

The theme for the 2015’s edition of the ELO conference, taking place in Bergen, Norway, was “The End(s) of Electronic Literature”⁸. The first research question posed by the conference was “is ‘electronic literature’ a transitional term that will become obsolete as literary uses of computational media and devices become ubiquitous? If so, what comes after electronic literature?” (“ELO Conference – Call for Participation” 2014). Such question leaves the space open to think of electronic literature as a mode of understanding of current digital practices whose frequency makes them unintelligible.

2.3.3. Digital Humanities — Being *Inside* the Technology

Digital humanities is a meta-discipline which aim is to extend and transform classical humanities in the light of the pervasiveness of digital networks. According to digital humanists, the migration and the production of knowledge through digital means is comparable to the advent of Renaissance print culture. In doing such comparison, digital humanities acknowledge the technological nature of classical humanities, in which the press and the book as technologies played a crucial role. Like e-literature, “Digital humanities is not a unified field but an array of convergent practices that explore a universe in which print is no longer the exclusive or the normative medium in which knowledge is produced and/or disseminated” (“The Digital Humanities Manifesto 2.0” 2009).

7 Marjorie Perloff (2006) calls these instantiations *differential texts*: “texts that exist in different material forms, with no single version being the definitive one.”

8 Conference website: <http://conference.eliterature.org/>.

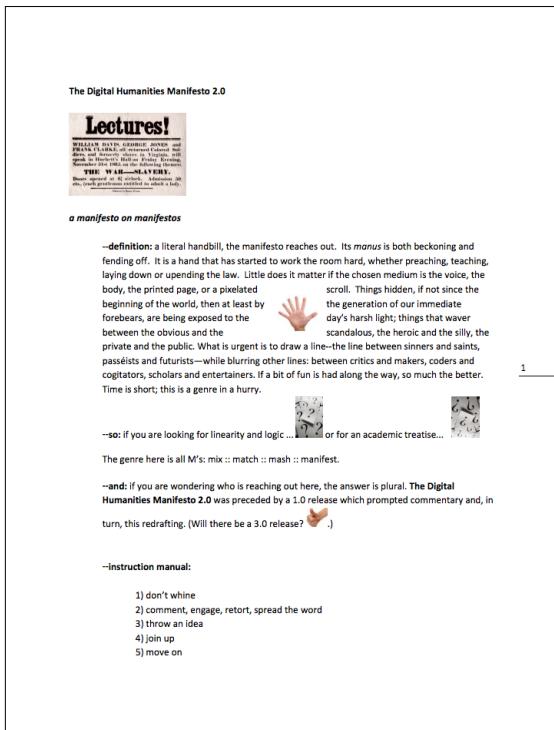


Fig. 4: Page from “The Digital Humanities Manifesto 2.0” 2009.

Digital humanities foster a multidisciplinary and collaborative approach in which authorship is shared among many parties. Specifically, authorship is grounded in design and in the construction of experiential, social, and collective processes (Burdick et al. 2012, 83). It’s not a coincidence that more than 100 contributors participated to the development of “The Digital Humanities Manifesto” (Presner 2009).

This is why the “project” is the fundamental unit of digital humanities. Digital humanities proceeds fundamentally through an experimental approach in which design — considered as a field of humanities — is central. Digital humanities “moves design — information design, graphics, typography, formal and rhetorical patterning — to the center of the research questions that it poses. It understands digital and physical making as inextricably and productively intertwined” (Burdick et al. 2012, preface). In this sense, experimental paperbacks like McLuhan and Fiore’s *The Medium is the Message* can be considered precursors of digital humanities. In the context of a project, design is for digital humanists a model of knowledge production:

For digital humanists, design is a creative practice harnessing cultural, social, economic, and technological constraints in order to bring systems and objects into the world. Design in dialogue with research is simply a technique, but when used to pose and frame questions about knowledge, design becomes an intellectual method. In the hundred-plus years during which a self-conscious practice of design has existed, the field has successfully exploited technology for cultural production, either as useful design technologies in and of themselves, or by shaping the culture’s technological imaginary. As Digital Humanities both shapes and interprets this imaginary, its engagement with design as a method of thinking-through-practice is indispensable. Digital Humanities is a production-based endeavor in which theoretical issues get tested

2.3. Communities of Practice

in the design of implementations, and implementations are loci of theoretical reflection and elaboration (Burdick et al. 2012, 13).

It becomes clear that digital humanists refuse the dichotomy between theory and practice, this is why they are eager to acquire both technical and critical skills, “they have to be *inside* the technology, ready to plunge into the workings of platforms and protocols at least enough to understand how to think critically and imaginatively regarding the tools they employ” (Burdick et al. 2012, 119). Therefore, they must take the effort to highlight the ideological assumptions hidden behind the technologies.

Such meta-discipline finds its origin in the work of Roberto Busa, a Jesuit who collaborated with IBM in 1949 in order to create the Index Thomisticus, a ‘lemmatization’ of the writings of Thomas Aquinas realized with the aid of automated processes. Successive experiences revolved around the necessity of creating protocols for the semantic tagging of digital texts. From such need derived the Text Encoding Initiative (TEI) and later the Extensible Markup Language (XML). In this sense, the first phase of digital humanities was to make humanities information compatible with the computational logic and practice.

Digital humanities foster the creation of prototypes and recursive processes in order to evaluate progress and create dynamic artifacts. Therefore copies are valued more than originals (“A Digital Humanities Manifesto” 2008, 9). Any reading of a file corresponds to the creation of a new copy of it, therefore the performative aspect of reading and writing is crucial (Burdick et al. 2012, 51).

Publishing plays a special role in the digital humanities: “Publishing, always a social act, becomes ever more so in the Digital Humanities, challenging academic presses and university libraries to stay true to their mission of promoting excellence while reaching out to expanded publics” (“The Digital Humanities Manifesto 2.0” 2009). The concept of “print-plus” encapsulates both the notion of a social publishing and the multiple instantiation of digital files: “The screens and augmented spaces of the print-plus era allow for the faceting, filtering, and versioning of corpora; for the coexistence of multiple pathways within a single repository; for multilinear forms of argument. It is extensible in the double sense of allowing for seemingly unlimited scale and of being process- rather than product-based” (Burdick et al. 2012, 125).

2.3.4. Critical Making — Technology as a ‘Matter of Concern’

The term *critical making* was developed around 2008 by researcher, educator, and technologist Matt Ratto. The concept was firstly defined during two workshops taking place in London and Amsterdam, the former about systems of learning and the latter about social media as “walled gardens” (Ratto 2011, 252). When speaking of critical making, Ratto (2011, 252) refers to a practice that involves “material production — making things — as part of an explicit practice of concept elaboration within the social study of technology”. A critical making project can be ideally divided in three phases that do not necessarily happen in a specific order:

1. review of relevant literature, concepts, and theories;
2. development of technical prototypes, as “means for conceptual exploration”;
3. iterative process of reconfiguration and conversation, alternative possibilities, etc.

While explaining the relationship between critical making and other methodologies and fields — like conceptual art and HCI —, Ratto specifically refers to critical design. The fundamental difference between the two is that critical making privileges the act of making rather than the “evocative object” as critical device as it happens in critical design. Furthermore, the prototypes derived from critical making projects are not meant to be exhibited. This can be seen also as a limit of critical making methodology, as in order to understand the discourse developed during the sessions, participation is needed.

Borrowing from Latour (2005), Ratto maintains that “critical making is about turning the relationship between technology and society from a ‘matter of fact’ into a ‘matter of concern’”. If we think of the field of publishing, we immediately realize how this shift is necessary: the physical book unconsciously is imagined as the *de facto* artifact for knowledge production and dissemination. Critical making, in a way similar to artists’ books, helps us to highlight the way in which the ‘paratextual’ entities of book history influence its content.

A syllabus of a critical making course run by Matt Ratto (2009) sheds light on possible topics tackled by critical making methodologies. Among the things explored, there are Digital Rights Management (DRM), privacy, and surveillance. These topics hold a special relationship with digital publishing. DRM is one of the most debated issues in ebooks and one of the major influences that determines the way formats and platforms behave. The course also proposes a week project devoted to the investigation of physical DRM. Something similar is explored in the project DRM chair, discussed along other projects about control and limitations of user experience in 3.5. Similarly, privacy and surveillance relate to reception of bibliographical documents in a peculiar way. According to Florian Cramer (2013, 39), physical books “may gain new importance because [they’re] partly off the digital surveillance radar.”

Critical Making is also the title of a project by Garnet Hertz (2012): a series of handmade zines that explore the connections between making and critical reflection around technology and society. In this case the term ‘critical making’ seems to be employed more broadly than in Ratto’s perspective. This shift in the meaning of the term allows to consider critical making as a community of practice instead of a methodology.

In the introduction, Hertz (2012) reflects upon his choice to develop the Critical Making series as a set of handmade zines — a mode of production and distribution that can already be considered a form of experimental publishing as it acquires meaning by opposing to the default way, which is currently digital distribution. DIY zines symbolically link to hands-on productive work. However, due to high request, the zines were later distributed online as OCRed PDFs.

From the start, when the idea of such publication was discussed with Mitch Altman, a need for a format incorporating “a DIY-style publishing model” was felt.⁹ As for the contents to be included in the zine, Hertz specifically mentioned the area of zines and experimental publish-

⁹ While *Critical Making* go against a sanitized vision of what the ‘Maker movement’ currently embodies, it is necessary to specify that the eponymous book by Chris Anderson (2012) connects such movement to the punk DIY zine scene.

2.3. Communities of Practice

ing. There were several possibilities in terms of production of the project like old keyboards as cover. Each of these required a big amount of work. Hertz (2012) specifically explains the reasons of physical DIY:

1. doing it yourself is a way to understand how things actually work;
2. post-digital print as a resistance to e-readers that poses a reflection about the supposed obsolescence of technologies that come back in inusitate forms;
3. bringing together people according to which “hands-on physical work has a clear place in enhancing and extending the process of critical reflection”.



Fig. 5: *Critical Making* zine, early prototype, 2012.

Reflecting on the strategies to teach publishing, educator John Maxwell (2014) connects critical making to the aspect of publishing as craft. He highlights the collaborative aspects and the iterative value of craft. Rhode Island School of Design (RISD) employs the term as well both as a title for a strategic plan for the years 2012-2017 and as a title of a retrospective of students' and tutors' work (Hermano and Somerson 2013).

If we strictly adhere to critical making as a methodology, it is not fully appropriate to connect it to the phenomenology traced in the next chapters. This is because several works considered do not include an iterative process and a workshop dimension. Conversely, using a more diluted notion of critical making, keeping the “hands-on work and the relationship with technology and making” (Hertz 2012) is particularly useful, as it highlights a clear attitude and role to art and design practices. As with the zine model in Hertz's project, critical making allows for a use of “traditional” practices as a way to highlight contrasts with the digital.

2.4. Experimental Publishing — Practical Meditations on Mediation

Very few terms have been used so habitually and carelessly as the word ‘experiment’ (Bilák 2005).

Avant-garde now must mean digital, often transient or temporary, time or non-time and site or non-site specific, leaving little opportunity for experiments to do the double task of processing both words and ideas. Clicking and swiping canonical poetry, hyperlinkages offer seemingly unlimited interpretation, soon sterilize every dissection tool in the readers’ laboratory. Waiting for each new tech-encumbered text, the scholars adjust poetry and language, wire-frame ideas and options, how clever and, in our meaning, how unpublished. Everything mediated, moderated, mediated, determines a new view of time and space, full of automation and all the spectrum of modernist presentation. Total editing kills texts (Smith 2013, 3.3).

In this section I provide a definition of experimental publishing based on a series of diverse points of view: an understanding of experimentality in the field of graphic design; the notion of avant-garde applied to ebooks; the listing of the necessary features of an ‘alternative publication;’ and the shift from artists’ books to artists’ publishing. Finally, the overview includes a couple of manifestos developed by practitioners of the field.

The most general definition of ‘experimental’ implies a relation to experience (OED); in this sense, ‘experimental’ is synonymous with ‘empirical.’ This interpretation suggests an activity based on practice. If we consider the word ‘experiment,’ we have a general sense which corresponds to the mere “action of trying anything, or putting it to a proof, a test, a trial” (OED). More specifically: “A tentative procedure; a method, system of things, or course of action, adopted in uncertainty whether it will answer the purpose” or “an action or operation undertaken in order to discover something unknown, to test a hypothesis, or establish or illustrate some known truth.” We can therefore infer that an experimental activity needs to be practical, it may or may not have a precise goal, and it may lead to new discoveries or, conversely, to reconfirm or demonstrate something already known.

In “Experimental Typography. Whatever that Means,” publisher and graphic designer Peter Bilák (2005) reflects on the meaning of the word ‘experimental’ in the field of graphic design and typography. In the first place, he refers to the scientific sector where “an experiment is a set of actions performed to prove or disprove a hypothesis.” In such context, objectivity obtained through the control of conditions is a requirement that allows other people to replicate the experiment. He argues that the field of graphic design rarely provides such conditions, so the question becomes: “What happens however when the outcome is ambiguous, non-objective, not based on pure reason?” To answer this question, Bilák identifies some trends on the basis of a book by Teal Triggs in which she asked 37 designers to express their view on experimentality.

According to one of these views, experimentality has to do with “going against the prevailing patterns, rather than being guided by conventions.” In this perspective, “a design experiment that is rooted in anti-conventionalism can only exist against the background of other — conventional — solutions” (Bilák 2005). The indirect point made here is that experimentality is a fluid category, since once its outputs become embedded into the “mainstream,” it loses its anti-conventional connotation. Experimental design therefore depends on the context in which is practiced.

Another perspective sees “experiment as taking risk.” Such idea of experimental design “is contrary to production-oriented design, where the aim of the process is not to create something new, but to achieve an already known, pre-formulated result” (Biłak 2005). Again, this position is fluid, since even experiments that aren’t originally meant to be commercial products can be assimilated. As an example, the first printed book obtained entirely from the Twitter feed of a user was made by an artist¹⁰ and only later it became a online service offered by several companies. Biłak (2005) radicalizes this notion, maintaining that:

no completed project can be seriously considered experimental. It is experimental only in the process of its creation. When completed it only becomes part of the body of work which it was meant to challenge. As soon as the experiment achieves its final form it can be named, categorized and analyzed according to any conventional system of classification and referencing.

If we do not limit ourselves to typography, this seems a too radical position. Let’s consider the idea of completeness of a project. Speaking about publishing, is it a project completed when the publication is produced? Or when it reaches an audience? If so, how big need this audience to be? If we refer to the survival phase in the publishing process (cfr. 1.2.2), a project can still exhaust its potential while being shared, remixed, or republished by other people. A less definitive understanding can be characterized by a definition of experimentality in relation to a specific temporal, cultural, and geographic context. For instance, an approach that wasn’t originally experimental — here understood as anti-conventional — can become such when related to a mutated context. An example of that is the proposal by the Russian government first and then the German one to use the typewriter in order to avoid surveillance (Elder 2015) (Oltermann 2014).

Sanders Kleinfeld (2014), director of publishing technology at O’Reilly Media, tries to set the ground for an ebook avant-garde by developing a theory around this notion. His point of departure is avant-garde literature, characterized, according to the author, by “interrogation of form”: the questioning of the boundaries of the book as medium. Kleinfeld maintains that avant-garde literature is neither intrinsically good nor high-brow. The examples of the genre he provides highlight the visual and tactile materiality of the book: from the black page in *The Life and Opinions of Tristram Shandy, Gentleman* by Laurence Sterne to the holes in every page of *Tree of Codes* by Jonathan Safran Foer. Some other examples reflect on the book’s structure and navigation: from the use of abundant footnotes in *Infinite Jest* by David Foster Wallace to the multiple paths offered by ‘Choose Your Own Adventure’ books.

The theory proposed by Kleinfeld is based on three principles. The first one is the “‘precession’ of book simulacra”, borrowed from Jean Baudrillard’s (1994) distinction between representation — characterized by the “equivalence of the sign and of the real” — and simulation — derived “the radical negation of the sign as value [...]. Kleinfeld follows Baudrillard’s “four successive phases of the image” and applies them to the evolution of ebooks:

1. the “reflection of a profound reality” — e.g. the way E INK devices mimic the physical codex;
2. how the image “masks and denaturates a profound reality” — e.g. the way iBooks’ interface emu-

10 The *Tweetbook* made by James Bridle (2009).

lates the presence of pages;

3. how the image “masks the absence of a profound reality” — e.g. how the following version of iBooks gives up such skeuomorphic effects.
4. finally, “it has no relation to any reality whatsoever; it is its own pure simulacrum.” – e.g. Device 6¹¹, an interactive book for iPhone and iPad in which the user can follow multiple paths visually represented as a plane space.

The second principle, called “the surprise of ersatz tactility,” has to do with the possible feedbacks that the single tactile interaction on touch devices can provoke. Finally, the third principle, labeled “narrative pliability”, suggests the possibility of multiplying the narrative outcomes.

The notion of ebook avant-garde as interrogation of form is problematic: while in print literature pushing the boundary of the medium naturally leads to the interrogation of the materiality of the codex, in electronic literature, where the outputs multiply, it becomes difficult to identify a specific medium — in the sense of support, carrier, container — to investigate. The question becomes: what actually is the ebook medium? Is it what we see on the screen or the conjunction between this and the device? What kind of interaction do we have to consider? Shall we privilege touch interaction over mouse and keyboard? Is there a privileged form when the ebook is not only responsive but also scattered through many instances all over the Web? Considering the potential of the standard ebook format solely from the perspective of fruition is limiting, especially when the experiments can't be reproduced on every platform.

Going back to the idea of avant-garde in literature, interrogation of the codex seems a means to a bigger purpose. Let's consider “What a Book is”, a manifesto of artists' book written by Mexican artist and publisher Ulises Carrión and intended for a literary audience (Carrión 1980, 7): “The new art uses any manifestation of language since the author has no other intention than to test the language's ability to mean something [...] Books, regarded as autonomous space-time sequences, offer an alternative to an existent literary genres.” Investigating the book as a concrete entity is a means to expand language, which can be seen as the medium that is actually questioned.

The whole structure of Carrión's manifesto is articulated through a old-vs-new dichotomy. This brings to another relevant feature of avant-garde: being antagonist to the *status quo*, aligned to one of the features listed by Biłak. In his *Dictionary of the Avant-Gardes*, Richard Kostelanetz (1993, IX), American artist and prolific maker of several artists' books, provides his own criteria to identify works that can be considered avant-garde; in short, these are “esthetic innovation and initial unacceptability.” One of Kostelanetz's references is modernist writer Gertrude Stein (1926) who states that: “If every one were not so indolent they would realize that beauty is beauty even when it is irritating and stimulating not only when it is accepted and classic.” A few page afterwards, Kostelanetz (1993, XIII) explains his criteria in more detail:

Used precisely, avant-garde should refer, first, to rare work that satisfies three discriminatory criteria: it transcends current esthetic conventions in crucial respects, establishing discernible distance between itself and the mass of current practices; it will necessarily take considerable

11 <http://simogo.com/work/device-6/>.

2.4. Experimental Publishing — Practical Meditations on Mediation

time to find its maximum audience; and it will probably inspire future, comparably advanced endeavors.

Kostelanetz (1993 XV) also analyzes the role of cultural antagonism of avant-garde, maintaining that it is a secondary feature “as artists’ social position and attitudes descend from the fate of their creative efforts, rather than the reverse.” Still, cultural antagonism can be used to measure the effectiveness of avant-garde. In case of ebooks, testing the boundaries of interactivity, multi-linearity, and multimediality can be hardly seen as questioning the status quo, since these features, even when they are not satisfied, represent the dominant narrative around ebooks (cfr. 1.1). Such an ebook avant-garde apologetically boasts what is already exposed.

The whole precession of the image applied to ebooks is also guided by a reality bias: the idea that the physical book is *more real* than the ebook. By doing so, the multiple materialities of the device are hidden or deemed irrelevant. This is typical of the discourse around digitization which is often confused with dematerialization. The current popularization of the notion of the *cloud* is exemplary in this respect.

Another aspect is hidden by the more superficial layer of ebook experience: what’s happens behind the curtains of the interface. For instance, the E Ink Kindle, supposed to be a mere “reflection of a profound reality,” actually profoundly transforms such reality in terms of, for instance, the power balance between writer, publishers, distributor, and reader (cfr 3.4). E Ink devices, and the Amazon Kindle in particular, do mimic printed artifacts only in appearance while their profound impact is hidden. According to James Bridle (2012):

What makes the Kindle unique is what makes Amazon unique: its physical presence is a mere avatar for a stream of digital services. In the spirit of its parent, it is more infrastructure than device.

In this sense, it is more correct to refer directly to the second phase in which the image “masks and denaturates a profound reality”. Thus, an ebook avant-garde should be more focused on subverting power relationships, and, in doing so, it necessarily needs to work with a broad understanding of the ebook medium. Limiting it to the user experience of EPUB and its proprietary parallels is not convincing since, for instance, early ebooks were plain-text files. Such humble format allowed for more radical avant-gardistic experiments, more in line with the tradition of artistic avant-gardes and neo-avant-gardes like Dada or Fluxus. In this perspective, it is helpful to consider the ebook as a practice, more than a medium or a product, as suggested by Paul Soulellis (2015) in the wake of Doctorow (cfr. 1.1):

The closer we look, the more we might question what “book” even means in this context. Digital culture is made up of “practices, not objects”; files have no meaning unless they can be “performed” in the appropriate computer system. The digital book is not an object, but a practice.

Following this idea of experimental, avant-garde publishing as antagonist, we find Alessandro Ludovico (2012, 50) wondering:

What does it mean to create an ‘alternative publication’ within this new [digital] environment? The basic requirements remain the same: to challenge the prevailing medium, to formulate a new original aesthetic based on the new medium’s qualities, and to generate content which is relevant to the contemporary situation.

While Ludovico, similarly to Biľak, acknowledges the necessity for an alternative publication to go against conformity, he also points out the necessity to “formulate a new original aesthetics” based on the medium. In this sense, his position is similar to the one of Kleinfeld. Again we are faced with the issue of what the medium of publishing is, especially when we speak about hybrid practices that involve different outputs, both electronic and in print. In this respect, Ludovico (2012, 50) mentions

The trailblazing ‘intermedia’ concept formulated in the mid-1960s by Fluxus artist Dick Higgins [which] seems to have now become the norm; and while independent publishers in the 21st century are increasingly apprehensive about their future survival, they will certainly use offset printing, photocopies, print on demand, PDF files, blogs, or whatever combination of media happens to be most useful for their current project.

From this point of view, we might argue that experimental publishing doesn’t simply interrogate its medium, but the multiple relationships among the media it involves. It’s in-between. It questions the notion of medium itself and the confusion around it. According to Cramer (2013, 13):

There are two almost unrelated notions of ‘media’ that clash in art theory today: the notion of medium as a means of artistic expression, such as painting or sculpture [...] and the notion of medium as a carrier of information that has its roots in nineteenth-century physics. [...] In McLuhan’s definition of media as ‘the extension of man’, ‘media’ even grows into a synonym of any technology.

This preoccupation with the multiplicity of media employed and the relationship among them is echoed by Tony White, book artist and Director of the Decker Library at Maryland Institute College of Art in Baltimore, who organized a panel in which he asked whether it makes sense to shift from the notion of ‘artists’ books’ to ‘artists’ publishing’. In his perspective, internet plays a crucial role in restructuring experimental publishing practices:

Many artists, photographers, and graphic designers who are creating artist’s publications for the first time in this century are using the internet as a collaborative community, and creative publication ideologies are in flux. Many of these artists are attempting to re-categorize, re-name or even re-establish their publication types as innovative and new, no longer as artists’ books or zines, but as something different. This flux is in large part due to the development of new online communities and networks for production, distribution, sales, and exhibitions, that have been transformed by the world wide web, print-on-demand technology, and the cultural and ideological transformations among artists and designers actively engaged in self publishing and DIY printing. This has led to a shift away from using the phrase artists’ books, to artists’ publishing, when describing this new paradigm (White quoted in Borsuk 2013).

We find a practical application of these principles in the *Relational Publishing* manifesto written by the Vienna-based collective Traumawien (2014). They stress the “unprecedented level of complexity” of publishing today and the necessity to pay attention to “the symbiotics of physical, digital, social, cultural, technological, and economic factors, in addition to poetical/aesthetical concerns.” Here comes relational publishing:

preoccupied with publishing’s effects, extending beyond the form of the publishing object and its attendant meanings and cultural symbolism. It is concerned with performance or

2.4. Experimental Publishing — Practical Meditations on Mediation

use, not as the natural result of some intended functionality but rather in the realm of behavior and uncontrollable consequences. It explores more open-ended processes that value the experiential and the participatory and often blur the distinctions between production and consumption.

Here we see an understanding of publishing which is not centered on the published product but the attention is towards the experiential aspects of publishing and the notion of experiment as a test without a prior expected result. The processual aspect becomes crucial in fact the manifesto concludes: “From Project to Product to [coalesce into a single] Process” and is accompanied by a picture depicting the Russian collective Pussy Riot.

Florian Cramer (2014), speaking of the publishing that relates to design research, broadly identifies two different strategies. The first one, more traditional, is publishing as documentation: this can mean to publish a catalogue after an exhibition or the proceedings of a research project. Opposite to this, there’s publishing as intervention: which may mean to use quick and pragmatic means to quickly spread the content. An example of that is posting a pamphlet to a mailing list. If we follow the line of our previous argument we might consider publishing as intervention closer to our idea of experimental as testing the ground without being fully aware of the consequences.

I’ll draw the conclusions of this overview by listing the features that an experimental publishing practice in the field of art and design might have. First of all, it is important to acknowledge that experimental is not a fixed notion: it is always related to the current state of the field. Experimental publishing needs to be related to experience, therefore it requires practice, hands-on activity. In this sense, it is parallel to the critical making attitude. Such practicality might be very useful in visualizing some processes and dynamics that happens under the curtains of digital interfaces. As in Traumawien’s manifesto, experimental publishing can be characterized as a trial outside a routine practice of publishing in order to “discover something unknown,” also by expecting an active role of the readers and the distributors.

In Bhaskar’s terms (cfr. 1.3), we might say that experimental publishing addresses the *model*, by building *frames* and producing content; therefore, it highlights mediation, making it visible and sometimes tangible. Experimental publishing provides *practical meditations on mediation*. It doesn’t simply interrogate its medium, but the multiple relationships among the media it involves. If we look again at the Carrión’s work, we see that this was already the case. He, as a poet and writer, was interrogating the boundary of his own medium (writing) in order to expand into the medium of book as physical object.¹² In his manifesto, an evolution towards other media, or better, towards a broader understanding of the textual medium, can be seen:

In the old art the writer judges himself as being not responsible for the real book. He writes the text. The rest is done by the servants, the artisans, the workers, the others.

¹² This is connected to a McLuhanian understanding of media, in which one medium contains another. As he states (1994, 8), “The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph”, where the choice of telegraph — instead of the book, for instance — doesn’t seem casual.

In the new art writing a text is only the first link in the chain going from the writer to the reader. In the new art the writer assumes the responsibility for the whole process.

After some time, the materiality of the book wasn't sufficient anymore and the distribution became part of the understanding of the medium as described in his essay *From Bookworks to Mail Art*, where Carrión (1980, 30) states:

Books offered the artist the advantage of multiplicity, and this made possible a wider distribution of the work. Mail Art strengthens these tendencies. They stop being external to the work and are incorporated as formal elements. It's not enough to confirm that the work doesn't acknowledge spatial limits any more. This has practical consequences of great importance. An artist doesn't need to live in an 'art-capital' to have his voice heard and as a matter of fact there are centres of Mail Art activity in places where there are no art galleries but only a modest post-office.

In a similar way, experimental publishing broadens its horizons by looking at the methods of production, distribution, and reception and the agents involved in these, highlighting their mediatory influences.

3.1. Structure and Selection Criteria

3. The Praxis of Experimental Publishing: Thematic Case Studies

3.1. Structure and Selection Criteria

This chapter focuses on a phenomenology of digitally-informed experimental publishing practices. This phenomenology is organized according to the model of publishing developed in the first chapter, thus, it is divided in five phases: production of content, production of artifacts, distribution, reception, and survival. For each of these phases, I describe and analyze a series of projects that belong or adhere to the communities of practice delineated in the previous chapter and meet the features of experimental publishing as explained in 2.4.

The projects are grouped according to a specific phase not because they are limited to this one, but because they highlight peculiar transformations in that phase which is therefore reinterpreted. This structure is oriented towards a vision characterized by a practical, hands-on approach to publishing, in which the designer or the artist deals with each phase in order to understand and to influence the whole publishing process. Often the projects I've selected were developed as prototypes or proof of concepts in educational contexts, such as art and design universities or workshops. The crucial role of these contexts is discussed in the conclusions of the dissertation.



Fig. 1: *g* by Jack Strange, lead ball, MacBook (2008).

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

[...] the computer encourages the author to mimic its workings where cutting and pasting are integral to the writing process. (Goldsmith 2011, 154).

In this section I look at works and projects focused on the influence of digital tools over writing, or more generally, over the production of knowledge, an influence that can be defined through the portmanteau “electracy” which stand for literacy in electronic media (Liu 2010, 316). These works are about the impact of desktop publishing, automatic writing systems, collaborative writing platforms, and processes that transform reading practices in new, different forms of writing.

Writing can be considered a technology involving “at least a twofold process of preparing material surfaces on which signs or codes are to be inscribed and of coordinating the human motor skills (or prosthetic robot arms) required to make the inscription” (Liu 2010, 310). A relevant issue that we encounter when we try to track the influence of computers on writing has to do with its multiple roles. Because of the many and diverse functions it performs, the computer — a universal machine — needs to be considered an *environment* rather than a *tool*. According to Paul Zelevansky (1991),

An encounter between a human and a machine, considered in terms of its effects on the machine as well as on the human, is a more complex narrative than that inaugurated by a human and a simple tool. Because the computer supplies the stage for the work, as well as the tools, materials and storage space, and because it may even serve in the end product, it certainly seems appropriate to think of it as an *environment*, a word which is also used to describe a package of related hardware and software. An environment can make demands and respond in kind.

Furthermore, it is relevant to consider the effects that modifications of writing technology have *outside* writing itself. According to Liu (2010, 317), “The adaptability of the alphabet to movable type and large scale machine industry translated gradually into the rise of universal literacy, newspapers, vernacular fiction, advertising, and new forms of trade and politics. Observing the tremendous effects of printing on the transformation of psychic and social life in Europe and elsewhere, Marshall McLuhan pointed out in *The Gutenberg Galaxy* that ‘the invention of typography confirmed and extended the new visual stress of applied knowledge, providing the first uniformly repeatable commodity, the first assembly-line, and the first mass-production’” (Liu 2010, 317).

Liu (2010, 318) also discusses how informatics privileges alphabetical writing over other writing systems: “From the hindsight of informatics, the singular advantage enjoyed by alphabetical writing over nonalphabetic writing is the algorithmic potentials of alphabetic letters with respect to cryptography, machine, and mathematics, which overshadow its much touted power of phoneticization with respect to human communication.” An example of that is Claude Shannon’s Printed English in which 27 letters are mapped to numbers. In this way, the alphabet becomes “more thoroughly and universally digital than it has been [so that] one of the oldest technologies — alphabetic writing — [is transformed] into a universal coding system to unlock the mind and the secret of life itself” (Liu 2010, 322).

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

As seen in 1.4.2, Desktop Publishing provided a great extent of freedom from intermediaries by providing amateurs and professionals alike with a set of tools that could be easily learnt. One of this tools is the Microsoft's Office suite, including, among others, Microsoft Word, a widely used word-processor which predated the suite, and Microsoft Excel, a spreadsheet program. According to programmer and writer Paul Ford (2014), Office is “powerful, omnipresent, and woven into the culture.” He also highlights its social value by stating that “Office is not so much a software product as a dialect that we all speak as we proceed about our labors.”

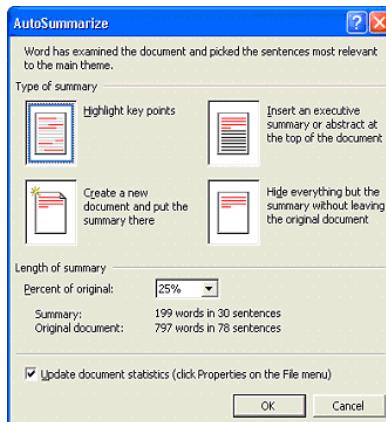


Fig. 2: Autosummarize function in Microsoft Word.

In his piece *Autosummarize* (2010)¹, American artist Jason Huff employs the eponymous Microsoft Word 2008's function in order to generate telegraphic ten-sentences summaries of the top 100 most downloaded copyright free books from Project Gutenberg, such as *Alice's Adventures in Wonderland*, *The Art of War*, or *The Communist Manifesto*. Apparently introduced in 2007, *Autosummarize* “identifies the key points in a document. AutoSummarize works best on well-structured documents, such as reports, articles, and scientific papers” (“Automatically Summarize a Document” 2015).



Fig. 3: *Autosummarize* by Jason Huff (2010).

The results, often surprising in terms of sarcasm and insight, are not dissimilar from spam and reflect the contemporary trend to squeeze as much information as possible to capture only what one needs. The project also shows the blurred boundary between human and ma-

¹ <http://jason-huff.com/projects/autosummarize/>.

chine authorship, something that is becoming more of a reality in journalism². Speaking of Autosummarize in *The New Yorker*, Madeleine Schwartz (2010) maintains that “it seems like a natural extension of the idea to rework the classics so that they are not just mediated by technology but completely transformed by it.”



Fig. 4: TWIMC 1000 by Michelle Son (2012).

In a similar project titled TWIMC 1000 (2012)³, Michelle Son selects ten books mostly concerned with art, design, technology, and science fiction such as *Neuromancer* by William Gibson, *The Laws Of Simplicity* by John Maeda, or *Software Takes Command* by Lev Manovich. These books are then summarized using Microsoft Word’s function and reduced to a thousand words. Son also employs the default borders and patterns found in Word. By choosing Times New Roman, she produces the effect of removing any trace of authorship and therefore highlighting the software’s autonomy.

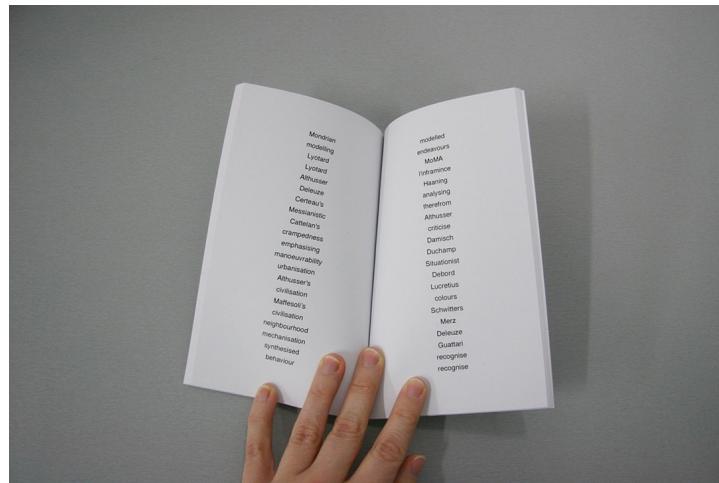


Fig. 5: Spread from *Excerpt* by Liz Knox (2011).

2 Cfr. (Miller 2015), (Taibi 2015).

3 http://michelleson.co.za/Michelle_Son/autosummarise.html.

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

Canadian artist Liz Knox focus on a Microsoft Word's functionality as well for her bookwork *Excerpt* (2011)⁴. In this case, the word-processor's in-built spell-check is taken into consideration. From a selection of art theory text, Knox extracts every word except the ones flagged as misspells by the software. According to the artist (2011), the result is “a distillation of an excerpt of art history, an ironic system for re-reading the familiar, through optics of reference and stretched language.” By reverting the use of spell-check, Knox bring also to the attention the invisibility of such routinely used tools and their influence of producing thought via writing.

Sometimes, by producing an alternative to the tools that are generally taken for granted, a project can bring attention to thier limitations. This is the case of Time Based Text (2006)⁵, a software created by Denis ‘Jaromil’ Roio and conceived together with Dutch net.art duo Jodi meant “to vehicle more human-input information in written text [by] record[ing] performance time of written text and [reproduce] it as additional information: saves and plays back every single action during the composition of a text, so that we can circulate an additional dimension of emphasis in written communication” (Roio 2015). TBT counts numerous implementations in different programming languages such as C/C++, Python, PHP, JavaScript. With TBT, hesitations, doubts, afterthoughts are preserved in a dynamic script that unfolds. By adding a temporal dimension to writing, TBT visualizes its performative features that are removed from common word-processors and the resultant publications.

Interviewed by curator and researcher Annet Dekker, Roio (2008) lists the inspirations that led to TBT: “James Joyce, Jack Kerouac and William Burroughs, to name just a few that challenged in various ways the performative act of what used to be called ‘automatic writing’”. He also highlights the relationships between code and language, by stating that TBT “softly unveils the mutual influence between literary art and computer programming suggesting they can benefit from each other not just in terms of productivity.”⁶

Each of the projects discussed above show a certain degree of automation in the writing process. Such automation, brought to its extreme consequences, leads to envision a totally automated textual ecosystem in which machines are both producer and consumer of content in the same way as humans do. According to Ted Striphias (2014), “Culture now has two audiences, in other words: people and machines. Both will have a significant hand in shaping the material that finds its way into the public realm.”

Netherlands-based designer Elizaveta Pritychenko addresses the phenomenon of Twitter bots in her 2014’s *Twitter Bot Encyclopedia*. According to Wikipedia (“Twitterbot” 2015), a twitter bot “is a program used to produce automated posts on the Twitter microblogging service, or to automatically follow Twitter users.”⁷

4 <http://lizknox.ca/section/270986-Excerpt.html>

5 <http://tbt.dyne.org/>.

6 A project with a similar goal was developed by John Caserta in 2004 (<http://johncaserta.com/tracking-letters/>). Instead of reproducing the script as an animation, Tracking Letters_ is a software that modifies the positioning of letters in oder to show the passing of time.

7 An actual community recently formed around the development of Twitter bots and the discussion about



Fig. 6: Spread from *Twitter Bot Encyclopedia* by Elizaveta Pritychenko (2014).

As Pritychenko (2014) declares in her encyclopedia, “8.5% of the firm’s active users are either algorithms or people using apps to aggregate tweets automatically without any human intervention.” The designer selected 55 bots and classify them according to the following categories:

1. frequency of tweets;
2. typology of content (text or images);
3. way of interaction (does the bot interact with users with replies or follows?);
4. level of pollution (the amount of tweets and images produced).

The resulting book is divided in two parts: the encyclopedia itself which lists the bots and the information about them organized in increasing order of data pollution, and a timeline showing all the tweets posted during a single day. The selected bots are very diverse; among them: @On_Kawara⁸ which, referring to the work of eponymous conceptual artist, only tweets the sentence “I AM STILL ALIVE #art” once per day; @everyunicode⁹ which is in the process of tweeting “every graphical character in the Unicode 6.2 Standard”; @MuseumBot¹⁰, tweeting “a random high-res Open Access image from the Metropolitan Museum of Art, four times a day”.

Pritychenko’s work was developed during her studies in graphic design at the Royal Academy of Art in The Hague. Her printed survey serves as a useful documentation to an internet subculture that has direct effects on human users. This kind of automation has a double-sided effect to the platform: “On one hand, legitimate bots generate a large volume of benign tweets, like news and blog updates. This complies with the Twitter’s goal of becoming a news and information network. On the other hand, malicious bots have been greatly exploited by spammers to spread spam. The definition of spam in this paper is spreading malicious, phishing, or unsolicited commercial content in tweets” (Chu et alia 2012, 2).

them. The group gathers on botforum.net. Furthermore, academic Leonardo Flores has been closely monitoring the field since 2011 within his I <3 E-Poetry project (<http://iloveeopoetry.com/>).

8 https://twitter.com/on_kawara.

9 <https://twitter.com/everyunicode>

10 <https://twitter.com/museumbot>.

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

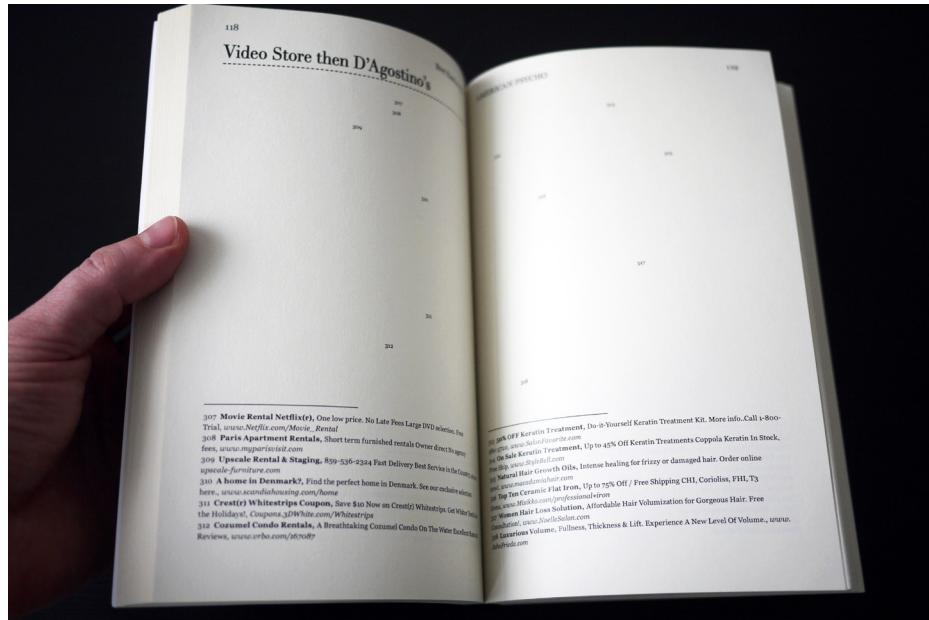


Fig. 7: *American Psycho*, Mimi Cabell and Jason Huff (2011).

Another project whose aim is to reveal the influence of digital tools and platforms over writing and communication is the book *American Psycho* by Rhode Island School of Design alumni Mimi Cabell and Jason Huff made in 2011¹¹. The book was created by sending the entirety of Bret Easton Ellis' novel *American Psycho* — known for its violent and masochistic atmosphere — through Gmail, one page at a time. Then, the artists collected the ads popping up next to each email and used them to annotate the original text, page by page. Cabell and Huff printed the content of the book mimicing the style of the original novel. The inside of the book is different though, since Ellis' text is fully erased except for the chapter titles and the apices referring to their added footnotes. The result is *American Psycho* told through its chapter titles and annotated Google ads.

According to Huff (2011), “This retelling reveals GMail’s unpredictable insensitivity to violence, racism, and sex. It serves as a blurry portrait of an algorithm that exists in our everyday communication simultaneously forming a new portrait of the lead character, Patrick Bateman.” Mimi Cabell (2010) explains the motivation behind the project:

We were most curious how Google would handle the violence, racism and graphic language in *American Psycho*. In some instances the ads related to the content of the email, in others they were completely irrelevant, either out of time or out of place. In one scene, where first a dog and then a man are brutally murdered with a knife, Google supplied ample ads regarding knives and knife sharpeners. In another scene the ads disappeared altogether when the narrator makes a racial slur. Google’s choice and use of standard ads unrelated to the content next to which they appeared offered an alternate window into how Google ads function — the ad for Crest Whitestrips Coupons appeared the highest number of times, next to both the most

11 <http://jason-huff.com/projects/american-psychos/>.

graphic and the most mundane sections of the book, leaving no clear logic as to how it was selected to appear. This ‘misreading’ ultimately echoes the hollowness at the center of advertising and consumer culture, a theme explored in excess in *American Psycho*.



Fig. 8: Spread from one of the books resulting from Autopian Fiction by Bryn Fenemor (2014).

While I’ve discussed above forms of automatic writing, the following project mixes automation both in reading and writing. Autopian Fiction (2014) by Bryn Fenemor is a set of three printed books derived from a performance that employs iTunes’ Text To Speech function and Apple Enhanced Dictation¹². 1892’s William Morris *News From Nowhere: Or, An Epoch of Rest – Being Some Chapters from a Utopian Romance* is dictated by iTunes’ Text To Speech; the produced sound is then captured by Apple Enhanced Dictation which rewrites the text with a certain degree of error caused by the imperfection in the software, the speed of the ‘reader’, and the surrounding noise. Each book includes the resulting text of this process with a different speed.

The choice of Morris’ utopian novel has to do with his well-known critique of industrial processes — “It is the allowing of machines to be our masters and not our servants that so injures the beauty of life nowadays” (Morris 1890), which digital automation can be seen as a successive step. In Fenemor’s words, “the text becomes more like a data set, something to be analysed in terms of signal and noise.” (Fenemor 2014) The project is a convincing fiction of autonomous machines and their implications without the help of humans.

While “books are being replaced by reading” (Shafer 2010) — a diffused, manifold mode of reading, able to level off the most diverse languages — the latter increasingly identifies itself

12 <http://p-dpa.net/work/autopian-fiction/>.

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

with a new kind of writing, whose privileged form is metadata (when was the last time the document was accessed? from what device? etc). Poet, writer, and filmmaker Tan Lin (2009) asks:

What is the precise relation between reading, regarded as a social activity that takes place in a network, and writing, which also takes place in a social network? From which of these two perspectives is the text framed? Can it somehow be both a read and written text simultaneously? What would that mean? Clearly, the reception of the work is foregrounded as much as the production and dissemination. And furthermore, reading, in a web-based environment, crosses into writing, publication, distribution, and marketing. Is a Twitter feed a form of publication? or is it writing? or is it distribution that is “pulled” by readers who “subscribe”?

In his project Ambient Fiction Reading System 01: A List of Things I Read Didn’t Read and Hardly Read for Exactly One Year (2006)¹³, Tan Lin takes such overlapping of reading and writing to the extreme, by recording for a whole year, in form of blogposts, the titles of some of his daily readings (hard to say if they occurred on paper or screen), and the time he spent on them.



Fig. 9: Evan Roth, Internet Cache Self Portrait: July 17, 2012 (2013), Vinyl Print 150cmx1300cm. Installation view from Gordian Conviviality at Import Projects, Berlin, DE. Photo: Benjamin Busch.

The criterion established by Tan Lin, while simulating the production of logfiles typical of computers, has probably implied a substantial manual effort. On the contrary, US artist and hacker Evan Roth realizes a project, in some way similar, entitled Internet Cache Self Portraits (2013). Here, he exploits a process automatically carried out by the browser: by retrieving the images embedded in the webpages that he visited from the browser’s cache, he produces large prints that become a sort of personal iconographic diary. Is it possible to apply such an idea to a participatory scale? Surfcafe, an online platform created by Brad Troemel and Jonathan

13 <http://ambientreading.blogspot.it>.

Vingiano (2012), allows members to anonymously publish every picture that appears in their browser. The result is a sort of constantly updated collective portrait. Collective and collaborative writing represents the other side of the influence of digital tools on writing. According to Bob Stein (2013), “[...] the boundaries between reading and writing will become ever more porous as readers take a more active role in the production of knowledge and ideas.”

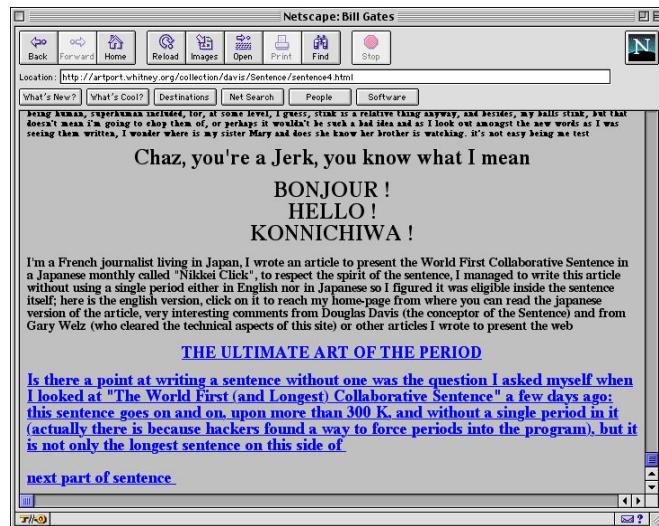


Fig. 10: The World's First Collaborative Sentence, Douglas Davis, 1994.

An early internet art work that anticipated contemporary tools for collaborative writing and partly exposed the effects of a shared online space open to contributions, is The World's First Collaborative Sentence, created by Douglas Davis in 1994¹⁴. The project, an interactive website in which any user could contribute to a continuously growing HTML sentence, was commissioned by the Lehman College Art Gallery. The only rule for the contribution was not ending it with a period.



Fig. 11: The World's First Collaborative Sentence, Douglas Davis, 1994. Installation view, Bronx Museum of Art, Bronx, New York, January, 1996.

14 <http://artport.whitney.org/collection/DouglasDavis/historic/>.

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

The project existed online for 10 years after that it stopped working. In 1995 the *Sentence* was donated to the Whitney Museum of American Art. According to Davis (2000), “the appeal of the Sentence is that it gives the world a space in which to speak its collective and its individual mind.” In 2012, the Whitney Museum undertook a preservation effort that led to the restoration of the original *Sentence* and the creation of a new version that can be expanded by users.



Fig. 12: *The Iraq War: A History of Wikipedia Changelogs*, James Bridle, 2010.

In his *The Iraq War: A History of Wikipedia Changelogs* (2010), James Bridle focuses on the ways in which collaborative knowledge on Wikipedia is produced. In order to do so, he selects a particularly significant and controversial Wikipedia page: the one about the Iraq War. The artist thus creates twelve printed volumes that include five years of edits by users behind the official lemma. The physical solidity of the work contradicts the transitory and processual nature of the Wikipedia model, something that generally is not taken into account while acquiring information, an attitude often characterized by indifference to the sources and their backstory. The twelve volumes, which are “the size of a single old-style encyclopaedia”, show a temporal dimension often hidden in the interface of digital tools. The log of edits shows how knowledge production is not a linear process that leads to an absolute truth but a process in constant flux.

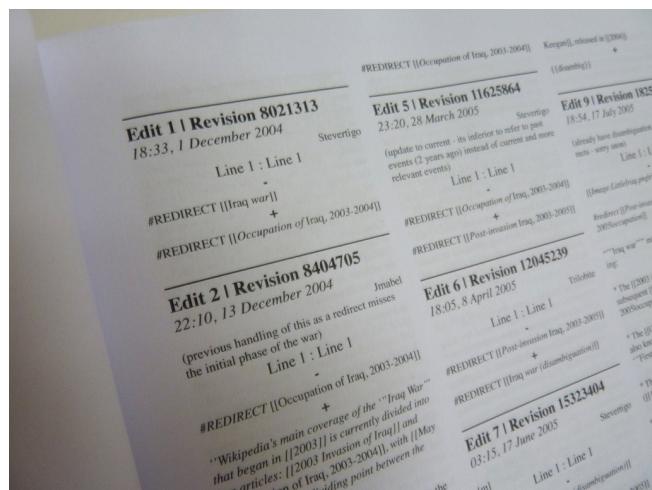


Fig. 13: Detail from *The Iraq War: A History of Wikipedia Changelogs*, James Bridle, 2010.

While describing the project, Bridle (2010) suggests to shift from ‘history’ to ‘historiography’ that is “as a set of facts, but as a process, and one in which, whether we agree or not with the writers, our own opinions and biases are always to be challenged”. “Wikipedia is a useful subset of the entire internet, and as such a subset of all human culture. — Bridle continues — It’s not only a resource for collating all human knowledge, but a framework for understanding how that knowledge came to be and to be understood; what was allowed to stand and what was not; what we agree on, and what we cannot”.



Fig. 14: Installation of Collate by Six:Thirty at the V&A Museum, 2013.

Collaboration is not necessarily limited only to the writing process but it can be extended to the editing and design processes like in the case of Collate. For the 2013 edition of the London Design Festival, communication and interaction design studio Six:Thirty realized Collate¹⁵, a physical installation at the V&A Museum consisting of a series of touchscreens that brought visitors together in the creation of an image-based catalogue. During the nine days of the festival, visitors had the chance to:

- select and tag images automatically downloaded according to the daily themes of the festival;
- design the spreads of the publication;
- vote the most interesting pages to include them in the final book.

Collate reflects some of the current mutations of the editorial process due to the influence of the Web and offers a perspective to reconsider the practice of publishing. Interviewed by myself, the members of Six:Thirty (2013) affirmed that “The spirit of Collate was to create a product through collaborative effort. Participatory design is a combinatory act similar to the traditional design process: we combine pre-existing elements to create, through trial and error, a new element. We didn’t edit any spreads or choose a particular page: the book itself is the raw output of the installation and it was even auto-paginated by an algorithm. We’ve designed the tools and the container but not the content”.

15 <http://sixthirty.pm/projects/collate/>.

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means



Fig. 15: Spread from *Collate* by Six:Thirty (2013).

Collate raises some open questions about the near future of publishing. In a way, the installation reinforces a traditional division of labor where the editorial process is clearly divided into a straightforward series of distinct tasks, specifically: select; design; vote. However, the contiguity of those phases in a physical space allows non-linear paths constituted by back-and-forth exchange among the people involved. Users only need to walk a few steps to go back to a previous phase and see how it affects the next one. In this sense, Collate asks whether our tools should foster a simplified — but more inclusive — atomization of tasks, or if they should give an overview of the intricacies of the whole editorial process, promoting a less elementary — but also deeper — form of content production.

Focusing on the tasks, we see that, in an age when quality tends to coincide with the quantification on social platforms, Collate employs user rating to pick out the contents of a single publication. Do such systems facilitate a genuine collaboration between producers and consumers, blurring even more the line between the two? But if so, will all unpopular, uneasy contents be buried in the rankings, making room for a safe, homogeneous and aseptic information ecosystem?

Berlin-based Swedish artist Kajsa Dahlberg reflects on a form of pre-digital unconscious collaborative writing in her 2006 book *A Room of One's Own/A Thousand Libraries*. Dahlberg compiles all the readers' marginalia included in the copies of Virginia Woolf's pamphlet *A Room of One's Own* kept at various Swedish libraries. These notes coexist next to one another in a new version of the book, realized in an edition of 1000.

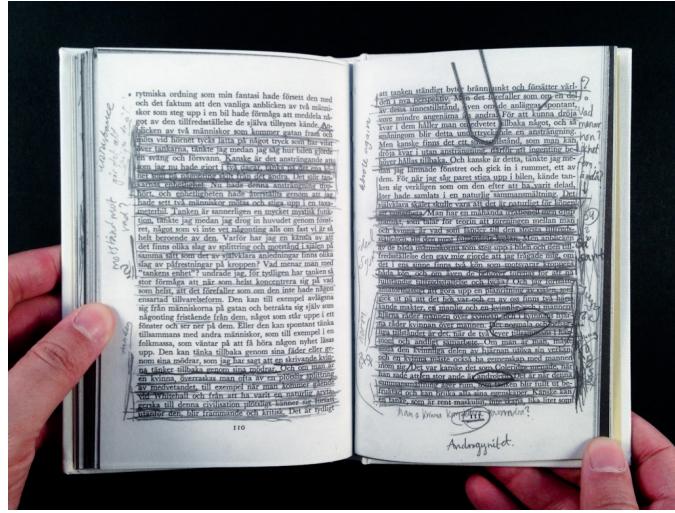


Fig. 16: Spread from *A Room of One's Own/A Thousand Libraries* by Kajsa Dahlberg, 2006.

The original essay, written in 1929 by Woolf under the name of Mary Beton, is about the representation of women throughout the history of literature as well as the conditions in which women were producing literature. In Dahlberg's version "words are reframed within a collective script of responses, tied together not only across individuals, but also across a period of nearly half a century (Woolf's book first appeared in Swedish in 1958)". *A Room of One's Own/A Thousand Libraries* anticipates some of the means of social reading and even the technology of "popular highlights", a service embedded in Kindle ecosystem. By putting together these connection, Dahlberg also highlights the separation among them.

As discussed above, the alphabet seems now more digital than it is ever been, because of it being mapped to numbers and therefore acting as an interface between natural language and machine code. Thus, programming languages represent the most evident instance of such kind of interfacing process.

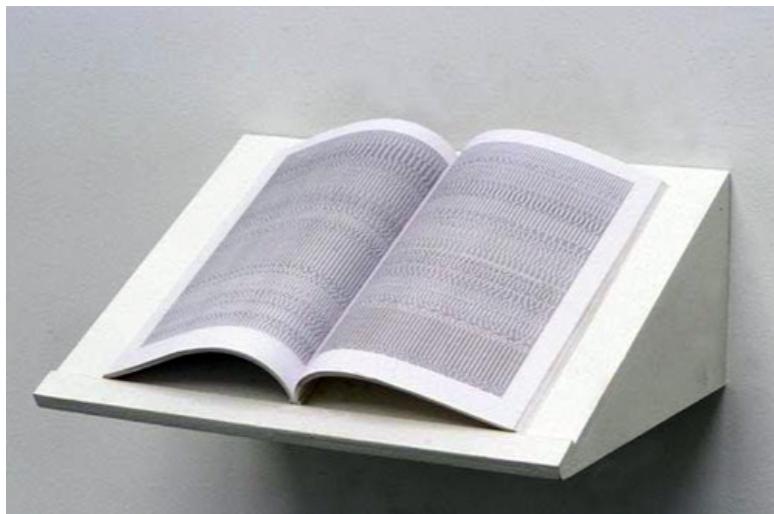


Fig. 17: Bible (Alphabetical Order), Rory Macbeth, 2007.

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

Starting from this premise, several artists and designers have started to apply a combinatorial sensibility to writing, considering pieces of text as a set of discreet elements. An early example of this strategy is Rory Macbeth's Bible (Alphabetical Order)¹⁶. The project, made in 2007, includes a DOS application programmed by Ian Macbeth able to alphabetize text, and a printed Bible resulting from the alphabetizing process. Amy Alexander (2003) frames the project as "a parody of the contemporary obsession with systems and data visualization" but — she continues — "it is a data visualization, working on the micro, rather than the usual macro, level."

```
0000000 0000 0001 0001 1010 0010 0001 0004 0128
0000010 0000 0016 0000 0028 0000 0010 0000 0020
0000020 0000 0001 0004 0000 0000 0000 0000 0000
0000030 0000 0000 0000 0010 0000 0000 0000 0204
0000040 0004 8384 0084 c7c8 00c8 4748 0048 e8e9
0000050 00e9 6a69 0069 a8a9 00a9 2828 0028 fdfc
0000060 00e1 1819 0019 9898 0098 d9d8 00d8 5857
0000070 0057 7b7a 007a bab9 00b9 3a3c 003c 8888
0000080 8888 8888 8888 8888 288c be88 8888 8888
0000090 3b83 5788 8888 8888 7667 778e 8828 8888
00000a0 d6f1 7abd 8818 8888 467c 585f 8814 8188
00000b0 8b06 e8f7 88a8 8388 8b3b 88f3 88bd e988
00000c0 8a18 880c e841 c988 b328 6871 688c 958b
00000d0 a948 5862 5884 7e81 3788 1ab4 5a84 3ecc
00000e0 3d86 dc88 5cbb 8888 8888 8888 8888 8888
00000f0 8888 8888 8888 8888 8888 8888 8888 8888
0000100 0000 0000 0000 0000 0000 0000 0000 0000
0000130 0000 0000 0000 0000 0000 0000 0000 0000
000013e
```

Fig. 18: The data behind the Wikipedia favicon.

At the same time, several artists and designers have highlighted the literary qualities of both code and data. Speaking about the Wikipedia favicon (the little image appearing on top of every browser's tab), Kenneth Goldsmith (2011, 22) argues that "A close reading of the favicon reveals an enormous amount of literary and aesthetic value, rhythmically, visually, and structurally unfolding like a piece of minimalist music."

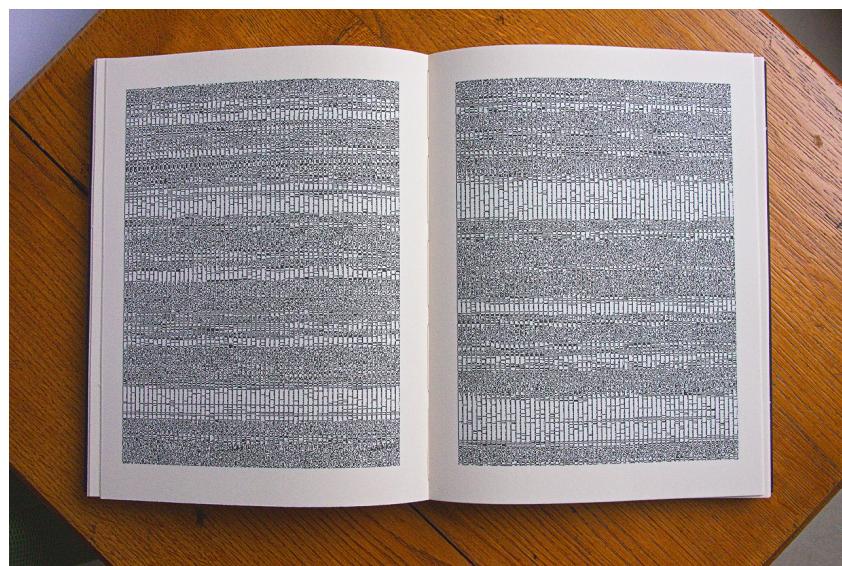


Fig. 19: A spread from *The SKOR Codex*, 2012.

16 <http://runme.org/project/+bibalph/>.

One project that reflects both on the literary value of data and the materiality of print is *The SKOR Codex*, a book made in 2012 by La Société Anonyme. The book, sent to different locations, contains binary encoded images and sound files that document the activity of the now closed SKOR, the Foundation for Art and Public Domain. The files in this book, where their digital binary data are expressed as black and white ‘pixels’, are “protected from bitrot, software decay and hardware failure via a transformation from magnetic transitions on a disk to ink on paper, safe for centuries.” The book also contains symbolic instructions on how to decode its content, which are inspired by the 1972’s Pioneer plaque and the Arecibo message.

```

Date: Tue, 14 Jan 2003 21:47:42 +1100
From: mez <netwurker@HOTKEY.NET.AU>
To: WRITING-L@LISTSERV.UTORONTO.CA
Subject: Re: OPPO.S[able].I.T[humbs]ION!!

Hello Arch.E.typal T[Claims of the n]ext W[h]orl.d
----- (mo.dueling 1.1 ) ----

N.terr.ing the net.wurk---
::du n.OT enter _here_ with fal[low]se genera.tiffs + pathways poking
va.Kant [c]littoral tomb[+age].
::re.peat[bogging] + b d.[on the l]am ned.
::yr p[non-E-]lastic hollow play.jar.[*]istic[tock] met[riculation.s]hods
sit badly in yr vetoed m[-c]outh.

Pr[t]inting---
::spammation. .r[l]u[re]ins. .all.

Exe.cut[up]able statements---
::do knot a p.arse.r .make.
::reti.cu[t]la[ss]te. yr. text.je[llied]wells .awe. .r[b]ust.

R[l]un[ge]ning the pro.program[mar]---
::re.a[vataresque]ct[ors|actrestles] + provoke @ yr response per[b]il[e].
::con.Seed.quenches r 2 b [s|w]allowed.
::big boots make filth k.arm[N limb.ic cyst.M]a.

```

Fig. 20: Mez Breeze’s ‘mezangelle’, 2003.

Finally, artists like Mez Breeze have explored code as literary text. In particular, she created a series of ‘mezangelles’: creole textual compositions where natural and programming languages coexist. Florian Cramer (2005, 11) describes her work as an “hybrid of net art, poetry, program and markup code [which] reflects a contemporary imagination of software, computation and networks, disassembling it into its smallest symbolic particles and reassembling them into a private language.” This early example is not an isolated one, in fact the idea of treating code as literary language and poetry in particular led to the development of a book entitled *code {poems}*,¹⁷ conceived by Ishac Bertran and edited by David Gauthier, Jamie Allen, Joshua Noble, and Marcin Ignac in 2012. *code {poems}* includes contributions from 55 writers. The abstract of the project reads:

Poetry is considered a form of literary art in which language is used for its aesthetic and evocative qualities. It contains multiple interpretations and therefore resonates differently in each reader. Code is the language used to communicate with computers. It has its own rules

17 <http://code-poems.com/>.

3.2. Production of Content — Reading is Writing: Automatic and Collaborative Processes of Content Production Through Digital Means

(syntax) and meaning (semantics). Like literature writers or poets, coders also have their own style that include - strategies for optimizing the code being read by a computer, and facilitating its understanding through visual organization and comments for other coders. Code can speak literature, logic, maths. It contains different layers of abstraction and it links them to the physical world of processors and memory chips. All these resources can contribute in expanding the boundaries of contemporary poetry by using code as a new language. Code to speak about life or death, love or hate. Code meant to be read, not run.



Fig. 21: A page from *code {poems}*, 2012.

The automatic and collaborative forms of writing I described in this section shows the prevalent condition of often seamless interaction between humans and computers. These projects therefore highlight the necessity of a more comprehensive idea of literacy consisting in the ability to interpret the mixture of natural language, code, and data that characterize the current textual ecosystem.

3.3. Production of Artifacts — Print on Demand: The Radical Potential of Networked Standardization

POD seems destined to occupy a position very much similar to that of photocopying in the 1980s and 1990s: a chance to print and distribute content cheaply, in a format which is physically stable, easy to use, and pleasant to the senses. Which is still very much what paper is all about (Ludovico 2012, 78).

In this section, focused on Print on Demand (POD) systems, I discuss the shifting materiality of printed books. Print on Demand radically transforms the production process of physical books, but also influences the idea of the book by providing a new ground for PDF files, that now witness the 'potentiality' of the printed book and sometimes this is sufficient to reach the goal of the publication gesture.

Print on Demand is a system that allows even just a single copy of a book to be printed and made commercially available without any prior investment through an online platform¹⁸. Print on Demand reverts the common assumption that sale come after print. Here, print happens only once a copy has been sold. POD platforms generally offer additional services such as online stores open to the public, the propagation of publications' data in databases like Google Books, the constant availability of titles at no cost, the supply of ISBN or ISSN codes.

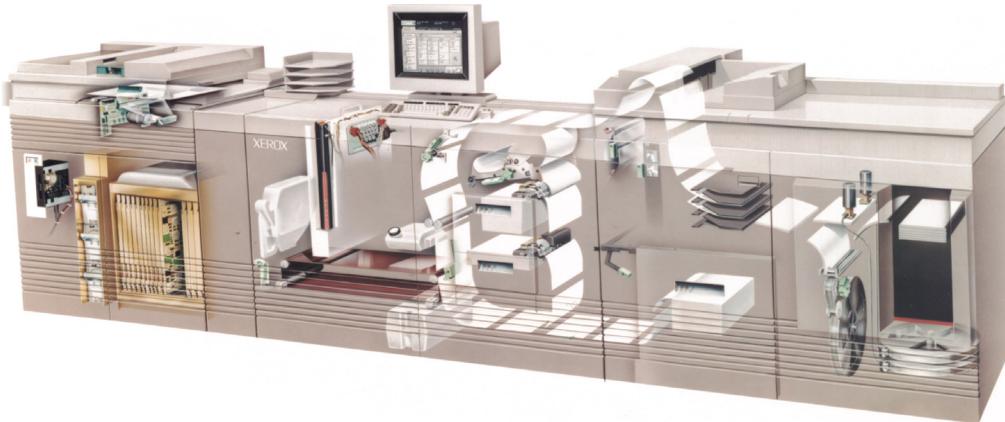


Fig. 22: Xerox DocuTech Production Publisher 135, c1990, the machine that gave rise to the POD industry.

It is not a trivial task to identify the origins of print on demand. It seems that the term was coined by Xerox around 1990, as a result of the marketing of the DocuTech Production Publisher. The above image shows the operation of this machine. The DocuTech was able to store and edit digital documents, print them, and also bind the printed sheets with pins or adhesive tape, producing books ready to use. With all probability, this machine fostered the growth of the Print on Demand industry.

An early advertisement for the DocuTech was included in *Black Enterprise* magazine in 1997. The advertisement is a clear demonstration of the digital nature of POD systems and its consequences: the metaphor used is that of the computer screen, the tagline is mainly about networked connection, while the headline builds on reduced time and distances.

Several technologies have allowed or encouraged the development of Print on Demand, among these:

- laser printing, first developed in 1969. Laser printing is crucial since it would have been uneconomical to print a few copies of a publication with earlier methods like offset;
- Desktop Publishing, that spread around the late 1980s (cfr. 1.4.2);
- the World Wide Web, without which communication between publishers and POD platform, and between platform and customer, would have been extremely slow and cumbersome;
- the PDF, a widespread format that can be outputted from basically any wordprocessor, discussed in detail in this section.

18 There are several platforms available that are able to produce diverse typologies of publication: among others, Lulu is focused on books, photo albums, and calendars; Blurb also includes prints magazines; Newspaper Club offers newspapers.

3.3. Production of Artifacts — Print on Demand: The Radical Potential of Networked Standardization

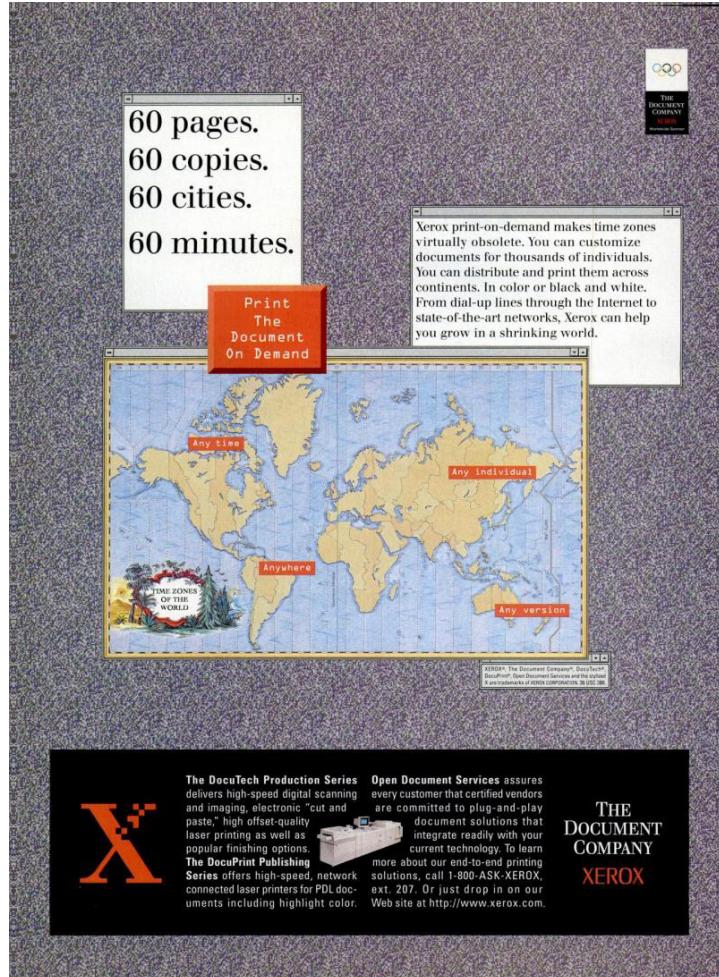


Fig. 23: Page from *Black Enterprise*, 1977.

In this perspective, Print on Demand represents an original mix of pre-existing technologies, as Morris Rosenthal (2004) argues:

The miracle of print-on-demand technology is not the printing process itself, which is actually the weak link from the standpoint of most publishers, but the digital library behind it. [...] The hero of the digital library story is Portable Document Format (PDF) created by Adobe and used globally in conjunction with their free Acrobat reader.

Among the typical uses of POD, there are: the marketing of publishers' backlists, 'vanity press' publications, and books available in the public domain that are digitized but are not in any catalogue¹⁹. The absence of any obstacle to the publication staggers the validating role of the published printed book.

¹⁹ An example of this last use is Forgotten Books, selling books such as *Personal Power* by Keith Johnston Thomas (1912), *The evidence of Immortality* by Jerome A. Anderson (1899), or *Vedic Mythology* by A. A. Macdonell (1897).

Another collateral effect of POD is 'book spam'. This phenomenon is caused by the possibility of fully automating the production of a book. Philip M. Parker has even patented a method for producing books that led him to publish more than 200.000 titles in the Amazon Store (Cohen 2008). In the discussion around the Wikipedia page for 'Print on Demand', the deceptive use of these methods is highlighted:

The way this confidence trick is played on the unwary goes like this: A student of a particular topic may innocently trawl any online book dealer's website and come across a book which appears to be on the topic of interest. The book is duly ordered in the belief that you are buying a book. Well you are not buying a book. What you have bought is a bound selection of random and usually totally unrelated Wikipedia pages with only the cover actually relating to the topic of interest. [...] It may be legal but it is still an act of deception. The information on the cover claiming the content has been compiled from Wikipedia is extremely (sic) easy to overlook. It is deliberately so ("Talk:Print on Demand" 2013).

Swiss designer and artist Manuel Schmalstieg (2014) researched in depth the phenomenon of book spam. According to Schmalstieg, the origins of book spam date back to 2009 or 2010. Schmalstieg also documented some of the strategies employed by the book spammer like choosing "really beautiful author names which the middle initial, which is proven to increase the seriousness and the credibility."

Print on Demand services perfectly suit the need of preservation of volatile Web content. An early 'Web to print' experiment was carried out by Tony Pierce in 2002, when he published his blog as a printed book, titled *Blook*, a portmanteau between 'blog' and 'book' coined by Jeff Jarvis. The term 'blook' gained popularity thanks to the Blooker Prize, organized by Lulu. It was so popular in 2006 that it was short-listed for inclusion in the Oxford English Dictionary and was a runner-up for Word of the Year ("Blook" 2015).

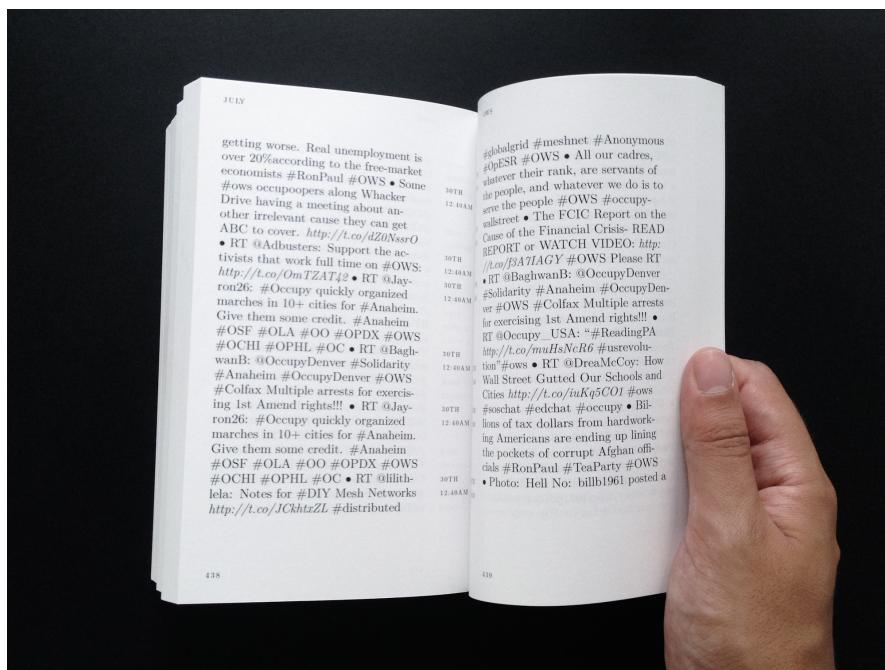


Fig. 24: #Occupy Books, Andrew LeClair (Ether Press), 2012.

3.3. Production of Artifacts — Print on Demand: The Radical Potential of Networked Standardization

Ether Press publishing house by graphic designer Andrew LeClair offered in 2012 a service that allowed to print a book with the latest tweets related to the Occupy movement, tracked through the hashtag #OWS²⁰. The proceeds went to support the movement. The project is particularly interesting since it took advantage of the temporal specificity of Print on Demand.



Fig. 25: Espresso Book Machine. Photo by Politics and Prose Bookstore.

Finally, there are site-specific examples of Print on Demand systems. One of these is the Espresso Book Machine, a complex apparatus with transparent frames through which one can see the process of getting a book printed and bound in about 15 minutes. The Espresso Book Machine is connected to a network of machines worldwide, so that a book printed in one location is stored on a common database and can then be printed somewhere else.



Fig. 26: FOMObile at Salone del Mobile, Milan, 2014.

20 <http://p-dpa.net/work/occupy-books/>.

An experimental project dealing with site-specific Print on Demand is FOMO²¹, which stands for ‘fear of missing out’, an idiomatic internet expression to indicate the anxiety linked to the inability to cope with the amount of information produced online on a daily basis. Developed by studio Space Caviar, FOMO is a print magazine generated with a custom made software which gathers social media interactions based on metadata filters such as an hashtag or location related to a specific event. The collected data is then arranged in a print-ready PDF according to a predefined design template. The PDF is then printed, bound, and distributed on the spot by the FOMObile, a collapsible mobile publishing platform. The publications produced by FOMO merge the data resulting from physical presence and online attention. In Space Caviar’s words:

The magazine’s production is a performative process that investigates the aesthetic and conceptual implications of the encounter between a centuries-old tradition of experimental publishing, the rising influence of machine intelligence in media, and the craving for instant gratification produced by real-time technologies. Variables such as background noise, number of people present, and intensity of social media activity inform the appearance of the final output, creating both moments of density and voids of activity. In Dadaist spirit, it is not so much an experiment in precision documentation as in finding alternative methods of representation and documentation of events (Space Caviar 2014).

Compared to ‘traditional’ books, the quality of POD services is sometimes disappointing. For instance, Lulu’s user interface — recently redesigned — was not so long ago cumbersome, both for the publisher and the purchaser. The choice of formats and paper offered by the platform is limited. Furthermore, the so-called ‘perfect binding’ — Lulu’s standard option — breaks after the books are opened a few times.



Fig. 27: *Tristano BK2740*, Nanni Balestrini, 2007.

21 <http://www.spacecaviar.net/projects/fomo/>.

3.3. Production of Artifacts — Print on Demand: The Radical Potential of Networked Standardization

This humble physicality is nonetheless distinctive. The peculiar identity of POD books is not dissimilar from cheap xeroxed zines. It's no coincidence that Xerox played a crucial role in the development of POD systems, both in technical and cultural terms. While it combined the functional components that make POD possible, it also supported experimental projects that employed it. In 2007, the Italian branch of the company promoted the realization of *Tristano*, an early example of a generative novel by Nanni Balestrini, first published in 1966 but fully realized only four decades after, when it was finally possible to print and bind unique permutations of the text. In Umberto Eco's words:

[...] nowadays, not only with the computer able to rapidly combine in the most dizzying ways, but with digital printing and Print on demand, the reader can have "in the flesh" a copy of the story different from all the others (which represents at the same time the triumph and death of the numbered edition, as each copy should be the number I), or have XXXX copies to compare them (given enough time) (Eco quoted in Balestrini 2007, X).

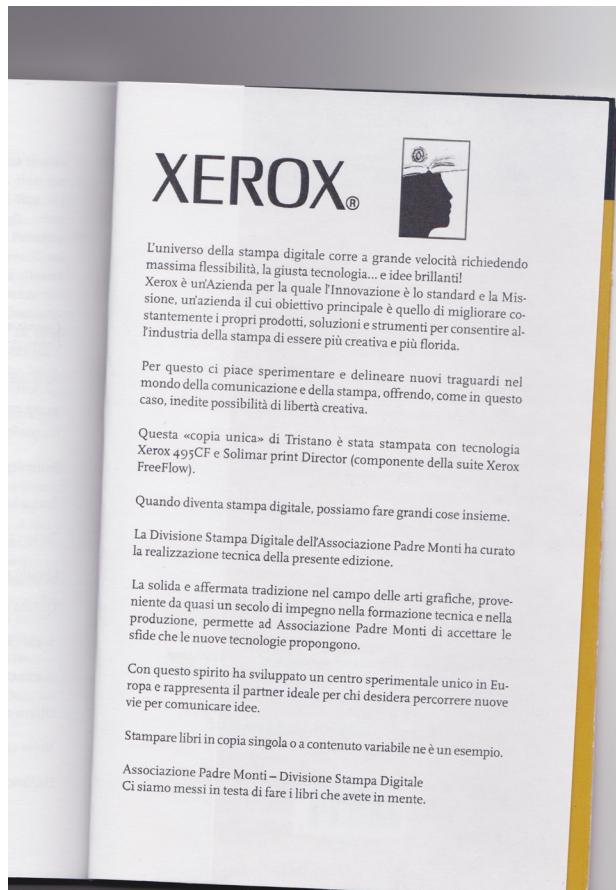


Fig. 28: Xerox promotional page in *Tristano BK2740*.

Another interesting Italian perspective on POD dates back to the 1990s and is included in Francesco Pirella's *Manuale dell'Antilibro*. According to Gillo Dorfles, Mario Persico, Francesco Pirella, and Edoardo Sanguineti — the signatories of the *Antibook Manifesto* that led to the creation of Pirella's manual — the precious, bulky, and ultimately Kitsch edition betrays the actual condition of the text in the information age. The *Antibook* is a kind of book that

frees us from the condition of the marketing, from the bookish schemas of the industry, from the counterfeiting of typographic styles. The container becomes the content and it makes it unnecessary the simulation of the book-object and the numbered art book, the covers, the jackets, the cases, the white pages, the antiqued papers. The Antibook uses standardize supports, recycled paper, recovered materials (Pirella 1999, 152).

Part of the book is specifically dedicated to Print on Demand. Pirella's proposal is particularly interesting because it is characterized by the attempt to mix recycle, self-production, and the industrial, standardized model of Print on Demand.

It seems appropriate to think of POD's materiality as a compromise among the technical infrastructure, users' needs, and the economic constraints of both the publishing industry and e-commerce. This is well exemplified by *Post-Fordism and its Discontents*, a book that exists in four versions and which design — by Nina Stöttrup Larsen and Žiga Testen — epitomizes its production and distribution processes. Its cover becomes a space to acknowledge the different editions, as well as their prices and print runs.



Fig. 29: *Post-Fordism and Its Discontents*, edited by Gal Kirn, 2010.

In this sense, POD books represent a genuine hybrid of digital and analog processes: under the guise of the “traditional” book form, there is a complex ecosystem made of file formats, metadata, retail platforms, multiple connections to online stores and, sometimes, even YouTube book trailers, authors’ blogs, etc. Sent through the regular postal system, the physical book is the tip of the iceberg of an infrastructure that takes advantage of digital printing, desktop publishing, PDF format, and Web 2.0. Therefore, POD is not a new technology in itself, but a fruitful combination of existing ones.

3.3. Production of Artifacts — Print on Demand: The Radical Potential of Networked Standardization



Fig. 30: *Blank on Demand*, hardcover volume, 15.2×22.9cm, 740 pages, €999,999.99 on Lulu, 2011.

In 2011, researcher Giulia Ciliberto and I developed *Blank on Demand*, a project that adopted the physical book as a unit of measure of a whole POD production and distribution process. It consists of two volumes printed with Lulu, whose formats correspond respectively to the maximum and minimum dimensions currently available. Similarly, page amount and price are set according to the limit values allowed by the platform. The two books are completely blank, except for the presence of the ISBN code. Deprived of any content, they reflect the influence of the current technological context on their materiality.



Fig. 31: *Dear Lulu*, AA. VV., 2008.

This isn't the only project aimed at testing POD platforms and experimenting with them. *Dear Lulu*, a book meant to calibrate various graphic parameters such as patterns, colors, and typography, is the result of a workshop run by James Goggin in 2008 at the University of Applied Sciences in Darmstadt. The procedure was afterwards extended to other platforms, such as Blurb and MagCloud. *Variable Format* is a manifold project conceived in 2012 by Lynn Harris, published by AND and designed by Åbäke with Pierre Pautler. Materials collected from the now closed library of the Byam Shaw School of Art form the content of a publication that is spread through twelve POD platforms. Instead of being resized to fit the various formats, a single layout is cut, so each printed artifact acts as a unique 'framing' of the same source. Finally, *The Black Book* by Jean Keller: made in 2013, it takes the value of books in a literal sense, drawing from the premise that printer ink is one of the most expensive substances in the world.

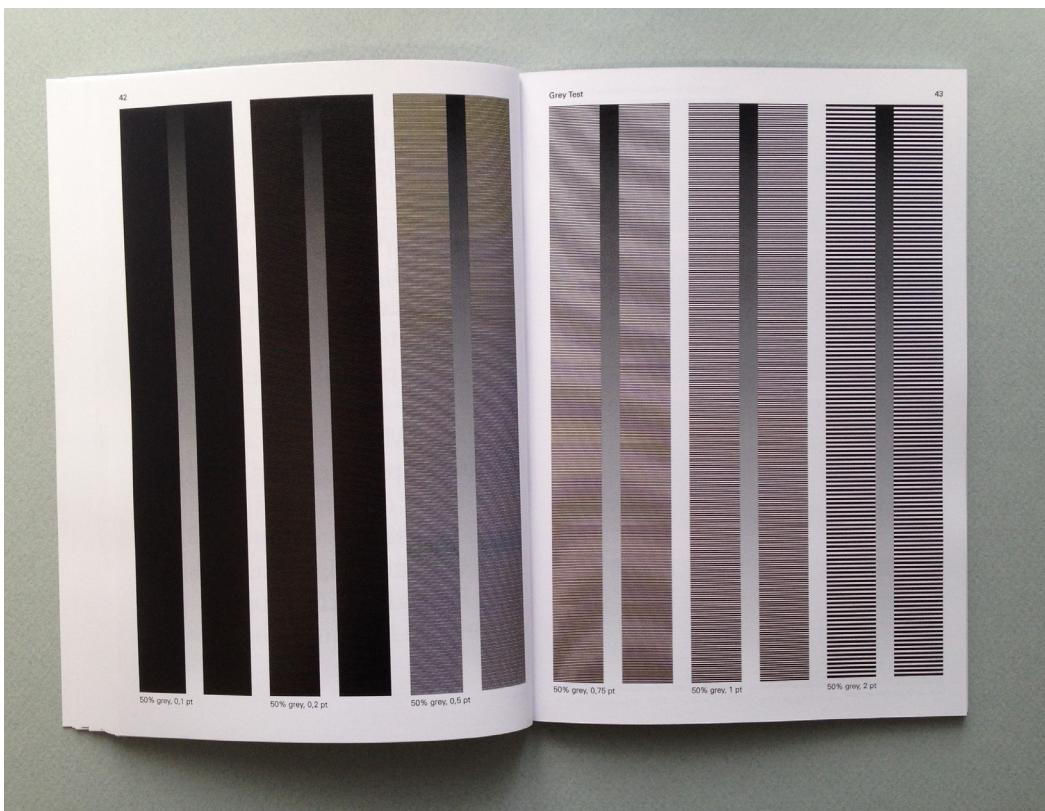


Fig. 32: *Dear Lulu*, AA. VV., 2008.

As these bookworks represent, to use Johanna Drucker's (2004, 161) words, a "self-conscious record of [their] own production", it is fair to ask in which ways POD informs the field of artists' books and connects to its legacy. As discussed in 2.3.1, the context of artists' books is an intricate one since it comprise very diverse artifacts: from inconspicuous conceptual paperbacks to crafty, sculptural book-objects. Probably, it is this latter embodiment that leads to a prejudice towards POD artists' books, rarely found at fairs or exhibitions. An anecdotal proof of this preception is a recent call to which the eligibles are "any artist bookworks other than SPOD (Self Published On Demand such as Lulu, Blurb and so forth)" (Artists' Book Cornucopia VI, 2014).

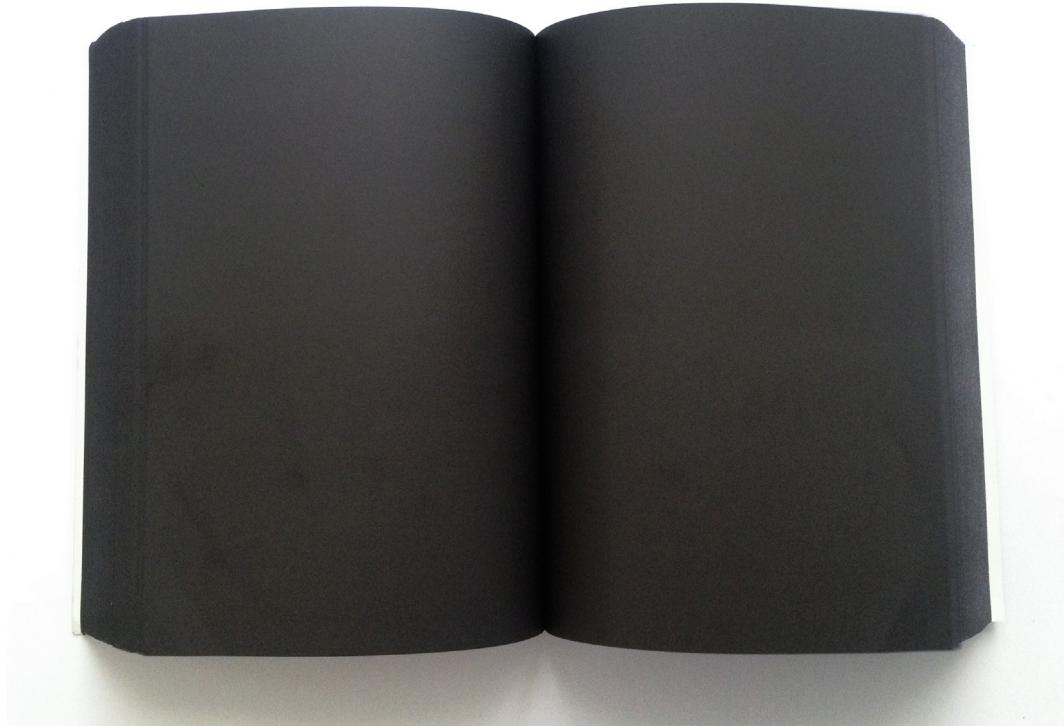


Fig. 33: *The Black Book*, Jean Keller, 2013.

Instead of failing to fit some dubious criteria, I argue that POD *reinforces* the inheritance of the artist's book as a democratic multiple. From a material perspective, I'd refer to some of Ed Ruscha's bookworks, playing with the evenness and anonymity of mass production in order to provoke a mild shock, "a kind of a huh?" in his own words (Ruscha 1973). Such evenness is a defining feature of POD systems: in order to produce unique copies, paradoxically they enforce the limitations of mass production by applying stricter standards. From an ideological perspective as well, POD seems to extend the democratic impulse professed by several artists working with books. In 1976, Sol LeWitt published the following text on *Art-Rite*:

Artists' books are, like any other medium, a means of conveying art ideas from the artist to the viewer/reader. Unlike most other media they are available to all at a low cost. They do not need a special place to be seen. They are not valuable except for the ideas they contain. They contain the material in a sequence which is determined by the artist. (The reader/viewer can read the material in any order but the artist presents it as s/he thinks it should be). Art shows come and go but books stay around for years. They are works themselves, not reproductions of works. Books are the best medium for many artists working today. The material seen on the walls of galleries in many cases cannot be easily read/seen on walls but can be more easily read at home under less intimidating conditions. It is the desire of artists that their ideas be understood by as many people as possible. Books make it easier to accomplish this (LeWitt, 1976).

This democratic impulse was quickly subsumed and partly extinguished by the dynamics of the art system: let's consider for instance the price of old *Art-Rite* issues, originally set to \$1, which is currently around 100\$ on eBay. In contrast, POD seems to foster a more profound proclivity to "convey art ideas [...] to all at a low cost". When using POD, several artists enable

the online preview of the whole book or make the PDF of the publication available for free, which, as Alessandro Ludovico (2014) points out, can be seen as a sort of sub-medium, as it evolves from a production standard to a standalone one.

In turn, the physical book seems to represent almost an incentive to distribute ideas in a digital environment, while its photographic documentation is a means to establish the publishing act. In fact, as poet Kenneth Goldsmith (2013) notices, experimental POD publications are sold — if ever sold — in extremely small amounts. Furthermore, their price is often set to the minimum, which means that the artist doesn't get any money — an aspect that raises legitimate concerns about the sustainability of such practice.

Artists who employ POD are often very conscious of its effects and implications. The Artists' Books Cooperative (ABC), founded in 2009 and consisting of several members located all over the world, declares:

Print-on-demand liberates artists from the oppressively expensive and laborious demands of traditional photobook publishing. Print-on-demand is fast, cheap, and light. It exists outside the power structures of publishers and distributors. [...] We're interested in raw ideas and there is no better transporter for a great idea than a book. A single book if needs be. And with the internet, the ideas in that single book can go viral and reach millions in a split second (ABC, 2014).

Borrowing from German philosopher Ernst Cassirer, media theorist Florian Cramer (2013) suggests to consider the book as a “symbolic form”, since it is able to transcend diverse media and supports. ABC's work echoes, and even extends, such perspective:

We're all involved in publishing *the idea* of a book online. That is to say, each of our artists presents their book in some form of digital format that exists online as well as in physical form. That doesn't mean it has to be an e-book. It could be the book presented as a video trailer on Vimeo, as a single line of text, a performance documented, an essay, a series of stills, or as a downloadable pdf file. The book exists in physical form and in conceptual form. It travels further and quicker as an idea than as an object (ABC, 2014).



Fig. 34: Library of the Printed Web, Paul Soulellis, 2013 - present.

3.4. Distribution — Performing Publishing: Fragmentation, Networks and Circulation

ABC member Paul Soulellis is the curator of the *Library of the Printed Web*, initiated in 2013. It includes publications in which content from the Web is transposed to print in ways that are often surprising (the library contains postcards, newspapers, zines). Many of these are POD books. This “archive devoted to archives” (Soulellis, 2013) highlights the radical potential of POD: with a few clicks and a fair amount of money, a good part of Soulellis’ collection can be physically reconstituted somewhere else, while its digital incarnation circulates online as multiform embodiments of art ideas.

3.4. Distribution — Performing Publishing: Fragmentation, Networks and Circulation

The definition of artistic activity occurs, first of all, in the field of distribution (Marcel Broodthaers quoted in Crow 1996, 177).



Fig. 35: Walead Beshty, FedEx Sculptures series, 2005 - present. Standard FedEx boxes containing the same shapes made of glass are shipped to the exhibition site, where the glass structures are presented on top of the boxes.

The advent of the printing press, which placed exact duplication at the core of publishing, had the side effect of producing the concept of edition²². An edition of a book is “one of the differing forms in which a literary work (or a collection of works) is published, either by the author himself, or by subsequent editors”. In terms of production, an edition of a work corresponds to “the whole number of copies printed from the same set of types and issued at the same time”

22 In an early definition, the meaning of edition corresponds to publication: “the act of putting forth; making public; publication” (“Edition” 1989).

(“Edition” 1989). This definition shows how such concept is inextricably connected to print as a technology. As Darnton (2007) suggests, it could be possible to trace all the different editions of a book in the form of a flowchart (cfr. 1.2.2). Through the concept of the edition, the idea of a separation between content and form starts to become apparent. In fact, an edition can differ from another one, not only in terms of content, but also in terms of the materiality of the support. A classic example lies in the work of Aldus Manutius who chose the handy octavo format to publish cultural milestones that, until then, were generally printed as intimidating folio editions (Bhaskar 2013, 112).



Fig. 37: Woman using a mimeograph machine. Picture taken 1905 and 1945 by Harris & Ewing.

Before the advent of cheap and widespread duplicating technologies such as the hectograph or the mimeograph, the proliferation of diverse editions was mostly limited to successful or popular books that were not only officially reprinted in different formats, but also pirated, ripped off, sent as excerpts and finally offered as cheaper artifacts. Networked digital technology had an impact on the duplication, reconfiguration, and distribution of texts in terms of scale and speed. To get a glimpse of such impact, it’s sufficient to consider that each time that a webpage is loaded by the browser, a copy of it on a local computer is made, thus the duplication cost of a text is close to zero. Similarly, digital networks have shaken the concept of edition: is every revision of a print on demand book to be considered a different edition? Shall every instance of a text require its own ISBN code?

The fluid threshold between version and edition touches upon the very concept of publication. In pre-digital publishing, the difference between version and edition lied in the state of a publication: a modified instance of a text that is not published would be a version of it, while a published one would be an edition. Networked digital media allow to revise a text *after*

it was published, maintaining the same identification (permalink, ISBN, etc). Furthermore, daily tools like the copy and paste, common files formats, and HTML (Hypertext Markup Language) simplify the process of copying a text or part of it, while reframing it in a peculiar environment. Such recontextualizations have also been automated: for instance RSS (Rich Site Summary or Really Simple Syndication) technology, first developed in 1999, allows to ‘absorb’ content from disparate sources and then organize it in a linear flow (Guha 1999). Likewise, the logic of reblog, first implemented as an open-source tool developed at the art and technology center Eyebeam²³, allows, at the press of a button, to make an identical copy of the chosen content on an owned website.

As a result of this immediacy, we could perceive a shift from distribution to circulation, being the former an activity carried out by the publisher and the latter a quasi-autonomous process in which is the work itself that travels thanks to the simultaneous effort of users and softwares. Circulation has profound effects on the content itself. In this section, I’ll discuss the work of artists and designers who take advantage of it, considering “context [as] the new content” (Goldsmith 2011). Some of these practitioners reflect upon the processes of circulation and reframing through writing and adopt them with the goal of spreading their message.

NETWORKED EFFECTS

In his essay “Dispersion”, Israel-born artist Seth Price (2002), drawing from Conceptual to Public art, discusses the implication of artworks’ dispersion in the public sphere referring to “framing and context, and constantly renegotiating its relationship to its audience” as the privileged strategy of contemporary art. He focuses the consequences of releasing work through a system of distributed media, defined as “social information circulating in theoretically unlimited quantities in the common market, stored or accessed via portable devices such as books and magazines, records and compact discs, videotapes and DVDs, personal computers and data diskettes” (Price 2002, 7). Price’s notion of distributed media is able to bind several kind of supports, devices, and fields of action according to the way they act as node in a network and the way they contribute to circulation.

This focus on distribution is intimately bound to the notion of public, which cannot be perceived anymore as a single static entity, but instead as “simultaneous private experiences, distributed across the field of media culture, knit together by ongoing debate, publicity, promotion and discussion” (Price 2002, 10). Price wonders whether this distribution through reproduction adds value to the work as it becomes exponentially more accessible. As examples of the potential of distribution, the author mentions a video from 2002 by a Pakistani fundamentalist group who kidnapped and then murdered the journalist Daniel Pearl²⁴, and Linux, an open-source operating system developed concurrently by programmers all over the world. In their incommensurable difference, they both take advantage of distribution, circulation,

23 <http://reblog.org/>. The team who developed ReBlog in 2002 was composed by Jonah Peretti, Michael Fru-min, Michal Migurski, Alex Galloway, Boris Anthony.

24 Supposedly produced for TV broadcast, the ‘Daniel Pearl Video’ massively circulated through the internet as a compressed file.

and proliferation in networked digital environments. These processes augment their resiliency and fluidity. Of course, the internet acts as the medium that enhances such reproducibility and boosts the echo effect.



Fig. 38: *Dispersion's Ukraine Art Student Bootleg*, 2006.

In Price's (2002, 13) words, "with more and more media readily available through this unruly archive, the task becomes one of packaging, producing, reframing, and distributing; a mode of production analogous not to the creation of material goods, but to the production of social contexts, using existing materials. Anything on the internet is a fragment, provisional, pointing elsewhere. Nothing is finished. What a time you chose to be born!" Price himself puts in practice this idea of distribution, by providing his essays online for free as a PDF, and keeping a loose track of the proliferating versions.

Paul Soulellis is an artist and a graphic designer from the US. Furthermore, he's a member of the Artists' Books Cooperative (ABC)²⁵, an international network of book artists. In 2013, Soulellis initiated the Library of the Printed Web²⁶, a collection of works in which content from the Web undergoes a process of "transduction" (Ludovico 2014) to printed matter (cfr. 3.3). Soulellis indicates four different tactics through which artists and designers carry out this transformation: grabbing; scraping; hunting; performing (cfr. Soulellis 2013).

25 <http://abcoop.tumblr.com/>.

26 <http://libraryoftheprintedweb.tumblr.com/>.

3.4. Distribution — Performing Publishing: Fragmentation, Networks and Circulation

Grabbing and scraping consist in simply appropriating — respectively manually or automatically — material from the Web in bulk. Hunting is a more selective process in which the exception is what counts. Finally, performing consists in “acting out [a] procedure, in a narrative fashion [...] The procedure is a way to interact with data and a kind of performance between web and print—the end result being the printed work itself”.

Borrowing from Marcel Duchamp, the author describes the state of difference between print and online as an “infrathin”, a sort of indifferent difference, difficult to pinpoint but yet present. The physical objects derived from this process still keep the traces of the digital network from which they come from. As Soulellis (2014) argues, this can be seen as a general condition of our times: “the networked condition pushes itself offline, beyond its own boundaries”, recognizing the indirect effects of digitalization.

Performing publishing, according to Soulellis, is the ability and the willingness to take advantage of “versioning”, by triggering “the array of possibilities that amplifies and expands along the network”. This movement produces an uncertainty about the original, because every reframing adds a certain ‘charge’ to the work and therefore makes something new out of it. No transposition is neutral, both qualitatively and quantitatively. In Soulellis’ (2014) words, “each of these frames brings its own context, with its own social and political implications”. Employing Bhaskar terminology, we could say that each *frame* brings in its *model* and ‘sews it up’ around content (cfr. 1.3).



Fig. 39: Kenneth Goldsmith on top of the printed matter arrived to Mexico City for Printing out the Internet, 2013.

Printing the work doesn't interrupt this process. As a demonstration, Soulellis mentions Kenneth Goldsmith's project *Printing out the Internet*²⁷. In May of 2013, US poet and writer Kenneth Goldsmith launched a call to "participate in the first-ever attempt to print out the entire internet." Participants were asked to print a portion of the Web that they considered particularly relevant, and send it to Mexico City. The printed matter was then categorized and exhibited as an untidy accumulation of paper. Although the performance — an homage to Aaron Swartz, an activist who fought for freedom of information — addressed a shift from the Web to the physical world, the project mostly lived online, as interviews to the artist and installation shots published on mainstream news sites like the *Washington Post* and reblogged on personal blogs.

THE FINAL NOVEL IN THE SERIES IS AVAILABLE IN THE FOLLOWING FORMATS:

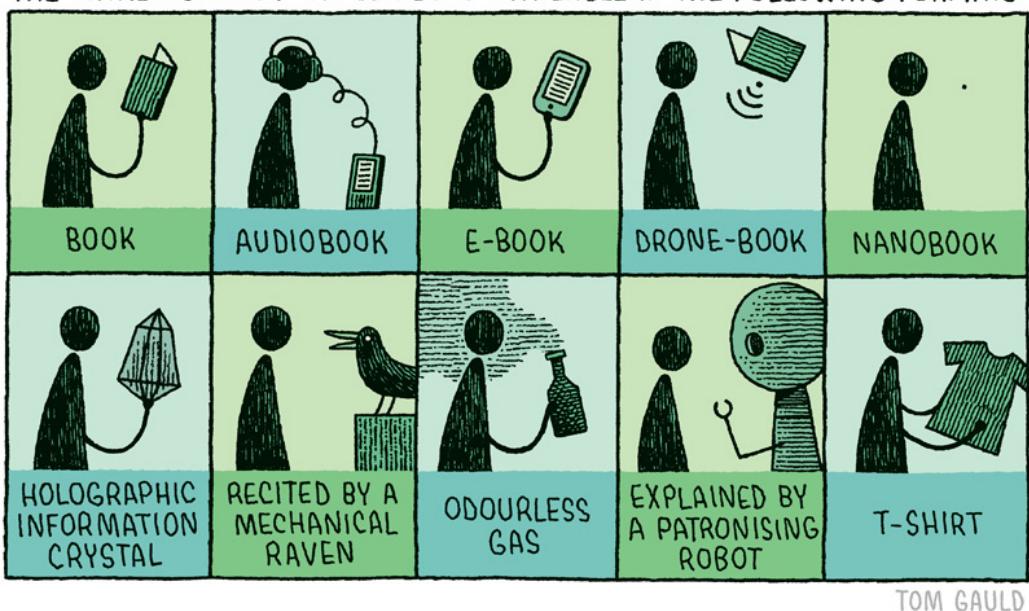


Fig. 40: Tom Gauld, The Final Novel in the Series Is Available in the Following Formats, 2014.

Performing publishing differs from spreading content to as many platform as possible, which can be expressed in technical terms by the COPE motto (Create Once, Publish Everywhere) (cfr. 1.1). Conversely, performing publishing means to design, or at least to consider, the potential chain reactions of the network. The idea of the work is not only expressed by the content, but also by the way it travels and it's reframed: "it is the performance of an idea by distributing it to a networked audience" (Soulellis 2014). Performing publishing means to envision the dialogue or the interplay between *frames*, and therefore highlight their embedded models. In other words, the publishing process becomes a kind of content in itself. Soulellis concludes his essay by advocating seamlessness, automatic processes, and continuous replication enhancing the potential of publishing as a performance.

27 <http://printingtheinternet.tumblr.com/>.

In 2009, Daniel Van der Velden from the Dutch design group Metahaven, together with Henrik van Leeuwen, Femke Herregraven, Nina Stöttrup Larsen, Rozemarijn Koopmans, and Kees de Klein took part in a two-days workshop at the Dutch Architecture Institute entitled *The Netbook and Its Library*. The premise of the workshop was to consider the library not as a physical warehouse but as a network, an abstract array of relationships between texts. To express such idea, the group set itself to reprint on a 1-to-1 scale a well-known book — in this case *The Rise of the Network Society* by Manuel Castells — by only using material found on independent and corporate Web repositories (the so-called ‘cloud’). In the end, three books were produced, all deriving from *The Rise of the Network Society*. These were defined netbooks: “A netbook describes how a single book exists on the net, distributed and fragmented in various incarnations and forms. Netbooks are decentralized but coherent networks of knowledge” (Van der Velden et al. 2009).

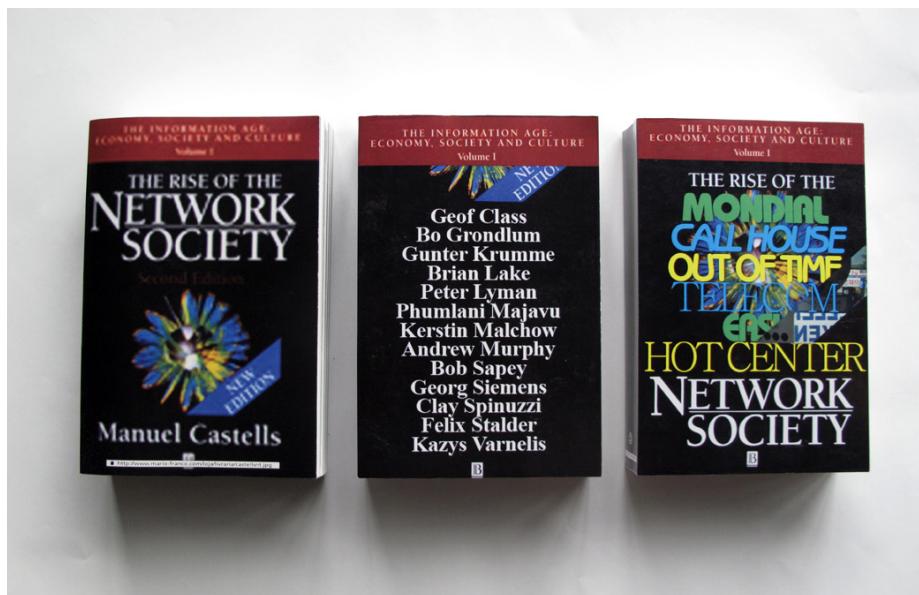


Fig. 41: The three netbooks produced during *The Netbook and Its Library*, 2009.

The first netbook in the series is the result of the attempt to reconstruct the content of the original book. This was done by taking screenshots from Google Books, grabbing mobile photos of the book pages from Flickr, downloading images from Amazon, low-res cover from personal websites, etc. The group was able to reconstruct around 68% of the whole book and left black pages in the new version to draw attention to the gaps, highlighting in this way the common assumption according to which the totality of our cultural heritage is digitized and freely accessible on the Internet, a “disillusion of information overload” (van der Velden et al. 2009). The second netbook, entitled *The Netbook about the Book*, is a collection of quotations, opinions, and reviews of Castells’ book that were found online. These, existing in diverse media forms, such as text, audio, and video are placed back in the space of the text they refer to. In this case the cover of the netbook lists the names of the contributors. Finally, the last iteration, entitled *The Netbook as Library*, attempts to show the locations where the collected materials of the other two netbooks belong to, considering both the places in which the materials were produced and the ones in which they were uploaded. Thus, the book includes images of data centers, universities, etc.



Fig. 42: The workshop group showing ‘black holes’ in the first netbook in the series, 2009.

After these “book scraping” methods became easier, they were included in exercises in the graphic design department of ArtEZ University in Arnhem, the Netherlands (Støttrup Larsen 2014). Furthermore, a similar workshop entitled iCloud was run in 2012 by Vinca Kruk from Metahaven at the Free University of Bozen. This time, the books meant to be reconstructed were *Das Kapital* and *The Medium is the Message*²⁸.

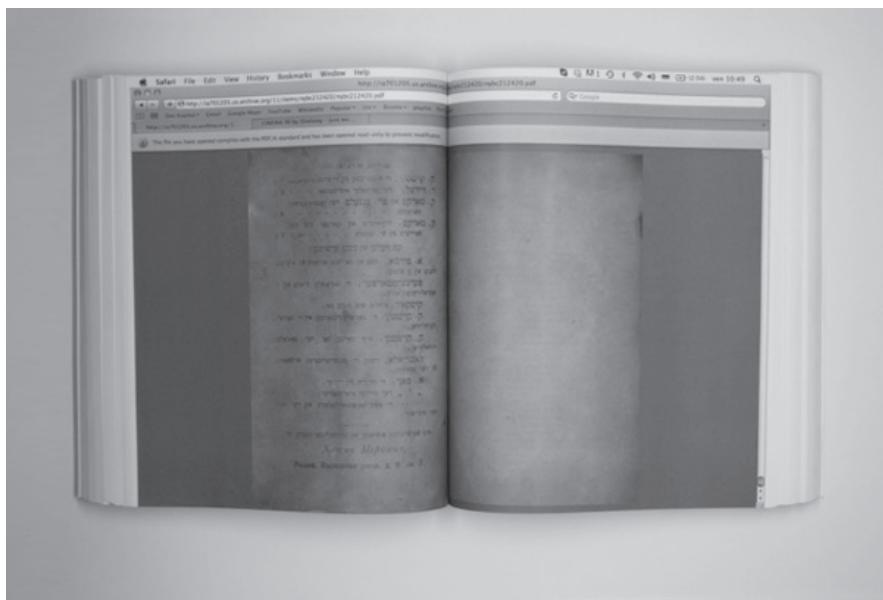


Fig. 43: A spread from *Das Kapital* produced by Maddalena Aliprandi, Simone Gatto, Leonardo Azzolini, and Elena Meneghini during the *iCloud* workshop, 2012.

28 <http://www.unibz.it/en/library/welcome/NewsOverview.html?NewsID=76646>.

3.4. Distribution — Performing Publishing: Fragmentation, Networks and Circulation

Reflecting on this expanded notion of the book as a dispersed entity, Daniel Van der Velden proposes a shift in the meaning of designing a book in such networked context. In his words, “To design a book may become like the process of coordination required to fine-tune all these online and offline efforts, rather than typesetting pages and creating cover imagery for a paper object” (Van der Velden 2011, 156).

In her 2011 installation at Catharine Clark Gallery in San Francisco entitles *Phantoms* (H__RT_F D_RKN_SS), Stephanie Syjuco, an artist born in the Philippines and currently based in San Francisco, several versions of Joseph Conrad’s *Heart of Darkness* are presented as paperback books. The ten versions of the novel, that is in the public domain according to US legislation, are downloaded from different online sources, such as Project Gutenberg or the University of Virginia’s website.

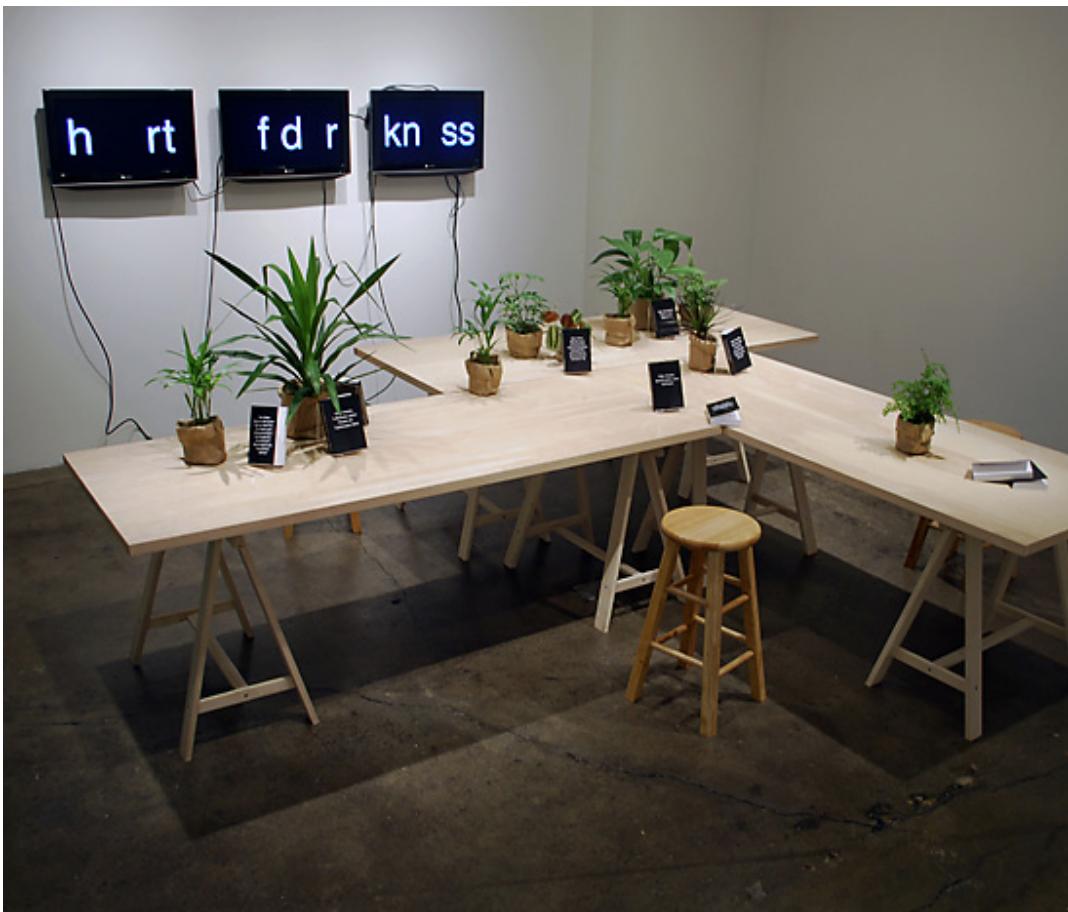


Fig. 44: *Phantoms* (H__RT_F D_RKN_SS) by Stephanie Syjuco. Partial installation view, 2011.

Syjuco preserved the paratextual elements of these versions, such as Google Ads or the sites’ menu items, as well as misspells or translation errors. The only text on the cover is the URL from which the book was downloaded. These Print on Demand volumes represent a physical epitome of the effects of digital circulation over the original text. As Syjuco (2011) states, “by creating physical books from digital files, the text further becomes modified, adding a layer of distance, mistranslation, but perhaps also functions as an inadvertent rewriting”.



Fig. 45: An online version of Joseph Conrad's *Heart of Darkness*, 2011.

Through the flattening of every element of the interface to linear text, Syjuco highlights the effects of the contexts in which the work circulates: contexts surrounding the text as well as changing its very nature. These are implicitly considered to be a part of the text itself, perhaps even a form of writing rather than a form of rewriting. The booklets are presented on a table with decorative tropical plants, suggesting the idea of a domestic, private space as well as an exotic exploration. This setup indicates the double nature of these text as both a public and private experience. Together with the books, there are “three monitors blink portions of the novel’s title, forming a cipher that can be fully legible only after watching it after several minutes” (Syjuco 2011).



Fig. 46: Spread from one of the Syjuco's versions of Joseph Conrad's *Heart of Darkness*, 2011.

ENACTING NETWORKS

The previous projects highlight some of the effects of the network on texts, effects that can be understood as an ascendancy of paratexts over texts — or *frames* over *content* — leading to even question such distinction. On the contrary, the following projects employ strategies that enact networks and, in some ways, ‘celebrate’ some of the values generally connected to them.

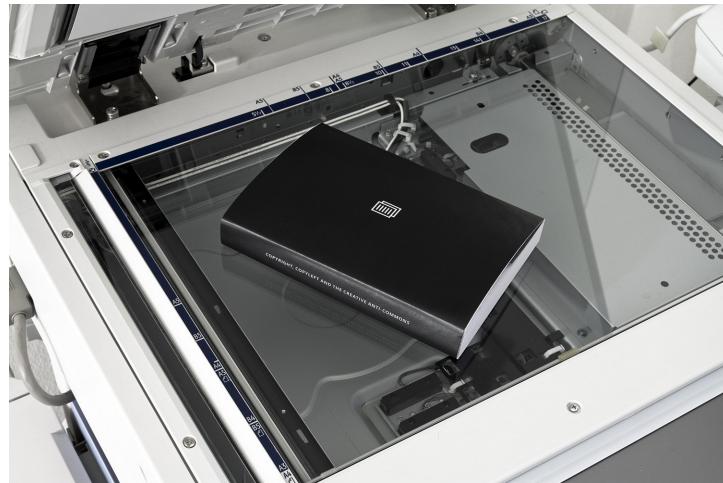


Fig. 47: C.O.P.Y by Martin Wecke, 2013.

C.O.P.Y²⁹, made by Berlin-based designer Martin Wecke in 2013, is a project developed during a course on “Post-Digital Publishing” held by Martin Conrads and Franziska Morlock (2014) at UDK University. Wecke produced a physical book that appears empty at the human eye, but when it is scanned or photocopied, it reveals the essay “Copyright, Copyleft and the Creative Anti-Commons” attributed to the Neoist avatar Anna Nimus (2006) that explores open distribution, remix, and fluid authorship.



Fig. 48: C.O.P.Y by Martin Wecke, 2013.

29 <http://www.hatsumatsu.de/#/projects/c-o-p-y/>.



Fig. 49: C.O.P.Y by Martin Wecke, 2013. The text appears when the book is photocopied.

The technology adopted, deriving from security printing and taking advantage of the limitations of copy machines, is called ‘void pantograph’. Void pantography was developed in order to warrant originality of a document: while certain words are present but invisible on the original document, they appear when the document is photocopied, marking in this way the copied version. The project, employing in an unexpected way a series of technologies that predate the web, *performs* a certain mode of publishing based on ‘peer-to-peer’ duplication. The text exists only when is copied, so, in way similar with code and electronic text, it needs execution (cfr. Hayles 2007) to become intelligible. Furthermore, as Wecke (2013) explains, “the text’s quality (legibility) gets better with every copy.” Such celebration of copying is also expressed by the physicality of the book which is designed to be open flat on the scanner.



Fig. 50: FREE TEXTS, Stephanie Syjuco, 2012. Partial installation view.

3.4. Distribution — Performing Publishing: Fragmentation, Networks and Circulation

FREE TEXTS: An Open Source Reading Room³⁰ is a 2012 installation by Stephanie Syjuco commissioned by the ZERO1 Art and Technology Biennial. The first part of the installation consists of a wall covered with flyers that include the URLs to download texts illegally uploaded by anonymous users. Visitors pull tabs from the flyers and can then produce their own bootleg physical copy thanks to a production desk that includes a laptop, a printer, and a binder. A bookshelf with printed versions of the texts is also part of the installation. According to Syjuco (2012), “This installation functions as a physical archive, public reading room and actual printing site for texts dealing with the thorny issues of digital copyright, open source culture, alternatives to capitalism and the state of the intellectual commons in the 21st Century.”

Syjuco (2012) also speaks of herself as “artist-as-librarian”, since she curates a selection of texts “around the history of the open source movement, creative commons, remix culture, and challenges to copyright in the digital era, [that engage] the public in a lively dialogue of ownership and public access.” The work has a clear political stance:

File sharing and copyright infringement—of media, entertainment, creative works, and intellectual property—are hot political and cultural topics in a world increasingly seeking to commodify the production and dissemination of ideas and information. [...] FREE TEXT: The Open Source Reading Room is a space devoted to an urgent and pressing topic that will shape how the future accesses and produces culture.



Fig. 51: FREE TEXTS, Stephanie Syjuco, 2012. The Production Desk.

Like in C.O.P.Y, visitors are invited to *perform* the publication process and, in doing so, they develop a critical awareness of the topics discussed in the books that are reflected in the material artifacts produced on the site. In this project, the practice of critical making is shared between the artist and the user. The printed books are a physical manifestation of both the topics of the texts and the labor involved in the circulation of content.

30 http://www.stephaniesyjuco.com/p_freetextsinstallation.html.

3.5. Reception — Questioning Controlled Consumption: Responses to Tracking, Control, and Access

[...] in our post-digital print culture, the challenge for digital literature is less to get beyond the Gutenberg Galaxy of the printed book, as it was for hypertext theory and practice like (Bolter 1991) and (Landow 1992) more than twenty years ago. Currently, the most urgent challenge is to get beyond the Google galaxy of controlled text, the Amazonic textual machinery, the infrastructures of controlled consumption (Pold and Andersen 2013, 14).

This thematic group of case-studies includes works of experimental publishing reacting to the augmented possibilities that editorial platforms have to control reception and limit access. In particular, the works discussed below question the modifications of ownership that affect digital artifacts. The shift of books from product to service (cfr. 1.1) — which could be also called “licensing culture” — has a few major effects: the publishers’ and distributors’ necessity to limit endless reproduction through DRM (Digital Rights Management), which in turn restrict the users’ possibility to manage their files and devices; the reading platforms’ ability to monitor and control the reading patterns of their users; the paradoxical coexistence of full and restricted access.

Scholars Andersen and Pold (2013, 2) maintain that the shift isn’t mostly about the digitization of book, but “more significantly [about] the ecology and infrastructure in and around books — and how Google, Amazon, YouTube, etc. have become embedded in the foundations of our culture of writing and of books (from libraries to universities)”. In this regard, we can say that the processes of digitalization (the secondary, non-intrinsic effects of digitization) are crucial. In order to describe the current state of publishing ecosystems, Andersen and Pold refer to Ted Striphias’ (2011, 180-182) notion of “controlled consumption,” which is in turn borrowed by Henry Lefebvre. In a society of controlled consumption, control is characterized by four aspects:

1. A big industrial infrastructure equipped with cybernetic systems — “directive and regulatory apparatuses” (Striphias 2011, 181) — able to manage production, distribution, exchange, and consumption;
2. Programming logics that, contrary to advertising, closely monitor the behaviors of consumers in order to minimize — or even eliminate — freedom of choice. Programming is actuated both in the digital context and in the physical one through, for instance, DRM or GPS tracking;
3. Controlled obsolescence that, unlike planned obsolescence, guarantees obsolescence by programming it into the product and making it therefore limited in functionality and durability;
4. A reorganization and troubling of specific practices of everyday life.

An important thing to consider is the role of the consumer who eventually becomes an “object of capitalist accumulation, despite the rhetoric of ‘empowerment’ and ‘interactivity’ that pervades contemporary media and consumer culture” (Striphias 2011, 183).

Following the premise that the computer can be both “a technology of control and a medium of expression” (Pold and Andersen 2013, 14), the works that follow explore controlled consumption and expose its inner dynamics within the field of digital publishing. In Andersen and Pold’s (2013, 13) words, “they are in contrast to the conservative remediation of the book by e-books, where the interface and reading experience is designed to be as close as possible to

3.5. Reception — Questioning Controlled Consumption: Responses to Tracking, Control, and Access

the codex, while all the changes occur behind the reading surface as pointed out through the concept of controlled consumption.” According to them, the role of digital literature should be to critically look under the hood of controlled consumption and provide alternatives to its seamless dynamics.



Fig. 52: The DRM Chair by Thibault Brevet et al., 2013.

Created in two days by interaction designer Thibault Brevet together with Gianfranco Baechtold, Laurent Beirnaert, Pierre Bouvier, Raphaël Constantin, Lionel Dalmazzini, Edina Desboeufs, Arthur Desmet, and Thomas Grogan³¹, the DRM Chair (2013)³² is a wooden chair that, thanks to its embedded sensor and actuators, is able to self-destruct after a certain amount of uses. The project questions a specific modality of DRM, employed by several publishing houses and distribution platforms: it consists in making an ebook (or any digital artifact) unusable after a certain amount of passages between devices. By transposing such procedure to the physical realm, its unreasonableness and the disadvantages that it brings to the final user become apparent.

31 They're all students or alumni of the ECAL University of Art and Design in Lausanne.

32 <http://thedeconstruction.org/team/les-sugus/>.

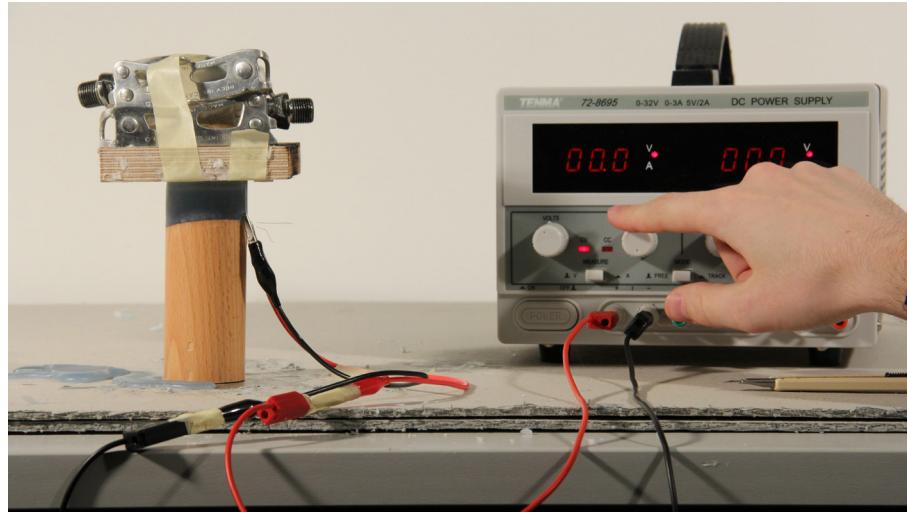


Fig. 53: Prototyping the DRM Chair by Thibault Brevet et al., 2013.

Halfway between product design and communication, the DRM chair is a performative artifact that highlights the opaque features (DRM are of course not so much advertised) of digital media. According to Tamar Shaffir (2014), “The DRM Chair reflects the paradoxes of expiring ownership, planned obsolescence, and nebulous property rights native to a world where sharing and surveillance abound in equal measure”. Interviewed by Joseph Grima, Thibault Brevet (2013) claims that he considers the DRM Chair as a reflection on the future of the Internet of Things³³ and a “conversation piece”, which goal was to “kick-start a conversation about [DRMs]”. In fact, the project gathered a considerable amount of online attention from both design and technology blogs (e.g. *FastCoDesign*, *Creative Applications*, *Wired UK*) but also more general news outlets (e.g. *Boing Boing*, the *Huffington Post*).

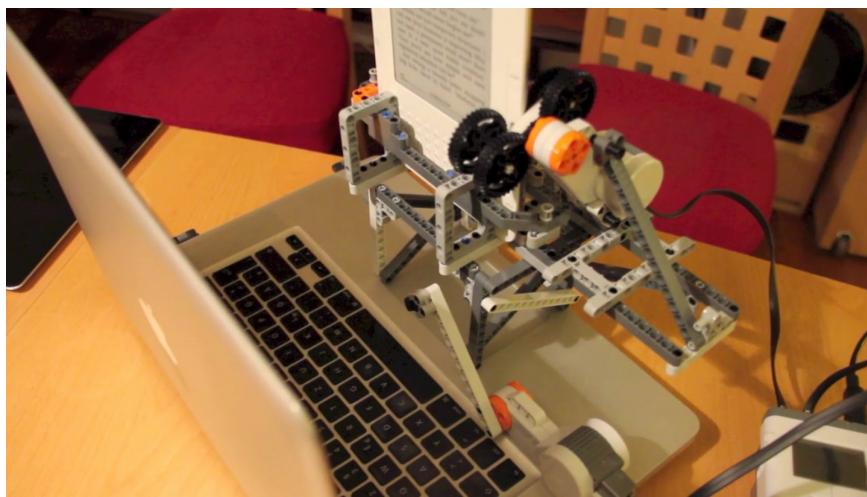


Fig. 54: DIY Kindle Scanner by Peter Purgathofer, 2012-3.

33 Internet of Things is a label that is generally referred to households and other devices that are connected to the internet and can therefore communicate with each other.

3.5. Reception — Questioning Controlled Consumption: Responses to Tracking, Control, and Access

Another project dealing with DRM and ownership of digital media is the DIY Kindle Scanner³⁴ created by computer scientist Peter Purgathofer between 2012 and 2013. The DIY Kindle Scanner is a machine, made out of a Lego Mindstorms kit, that physically connects to a laptop and a 2nd generation Kindle. The machine presses in sequence the next page button on the Kindle and the laptop's spacebar which triggers its camera. In this way, each page from the current book shown on the Kindle is photographed, sent to a cloud OCR service, and finally a plain-text file of the book is produced.

Like the DRM Chair, this project is described by Purgathofer (2013) as a “provocative thought experiment” that isn’t supposed to be actually employed. Purgathofer refers to an open letter by Amazon CEO Jeff Bezos (2002) in which he states that “When someone buys a book, they are also buying the right to resell that book, to loan it out, or to even give it away if they want. Everyone understands this.” The DIY Kindle Scanner shows at the same time how this principle was violated over time but also how the techniques to enforce restrictions can be easily overcome. The DIY Kindle Scanner is a parasitic apparatus that purposely transforms the instantaneous transfer of digital information in a cumbersome, mechanical, and repetitive process.

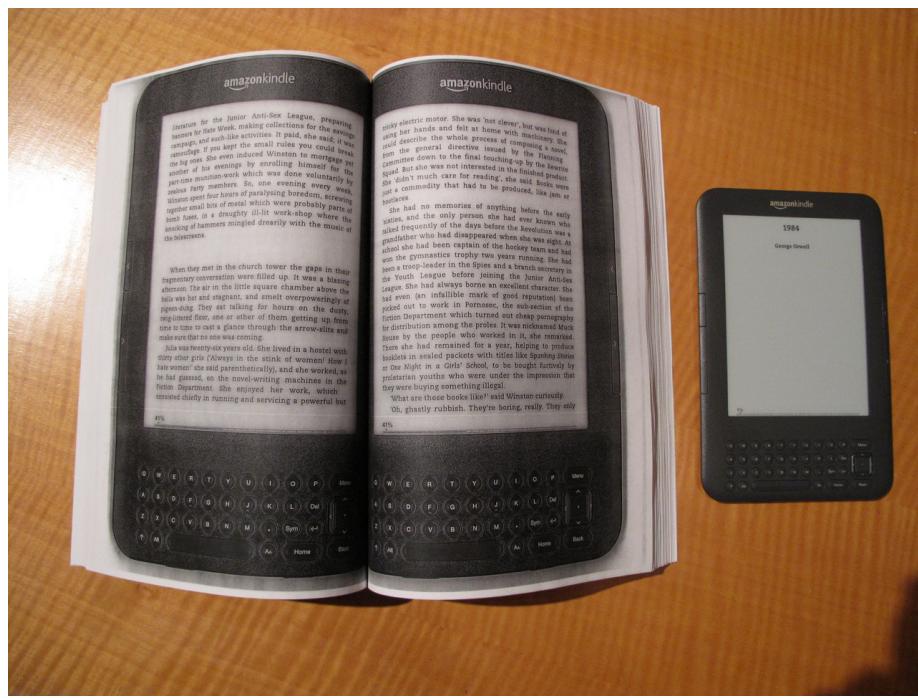


Fig. 55: E-book Backup by Jesse England, 2012.

In his E-book Backup project made in 2012³⁵, American artist Jesse England refers to an episode which casted Amazon in a bad light because of its unruly control over digital books within its ecosystem. In the summer of 2009, the digital copies of *1984* and *Animal Farm* by George Orwell disappeared from many devices of unsuspecting users without prior no-

34 <https://vimeo.com/73675285>.

35 <http://jesseengland.net/index.php?/project/e-book-backup/>

tice³⁶. E-book backup is a physical copy of *1984* obtained by photocopying page after page the same novel from the Kindle and binding all the pages together. The resulting paper book is meant to be used in case Amazon would remotely delete the digital copy again.

England's work questions narratives of linear progress by showing that 'traditional' media could be better than newer ones in terms of user's management and privacy. In other words, E-book backup puts innovation in context. With his work, England (2014) hopes "to highlight what is lost and gained as we transition from one way of seeing (or hearing) to the next." The artist also reflects on the consumer's role, which is "reduced from copy owner to content license holder, with all the added limitations" (England quoted in Valentine 2014). However, he believes that eventually an open standard for books will be generally adopted (England 2014).



Fig. 56: "Download for Free" banner produced by the Pirates of the Amazon add-on, 2008.

In 2008, two students of the Media Design M.A. at the Piet Zwart Institute in Rotterdam, under the guidance of media theorist Florian Cramer and programmer Denis Jaromil Roio, created Pirates of the Amazon³⁷: a Firefox add-on (an extension for the browser) that creates a connection between Amazon's web store and The Pirate Bay, an online index of digital content to download (often unofficially or illegally). While browsing products on Amazon, the add-on searches the same product on The Pirate Bay and, if it finds a downloadable torrent, it adds a link to the Amazon page, making it immediately free to download. The add-on simply made a connection between Amazon and The Pirate Bay, two platforms respectively representative of paid and free content. That's why the students defined the project "a ready-made and social sculpture of contemporary internet user culture" ("Documentation" 2008).

One day after the plugin was released, Amazon's lawyers sent a take down request to the Piet Zwart students. But the project gathered in the meantime the attention of several blogs, newspaper, and magazines — e.g. *The New York Times* (Stone 2008), *Wired* (Kravets 2008),

36 The event was heavily covered by major newspapers such as *The New York Times* (Stone 2009) and *The Guardian* (Johnson 2015).

37 <http://tobi-x.com/pirates-of-the-amazon-browser-add-on.html>.

3.5. Reception — Questioning Controlled Consumption: Responses to Tracking, Control, and Access

Cnet (Katz 2008) — and provoked a long discussion on news aggregator Digg³⁸. Cramer and Roio (2008) openly defended the project on mailing list *nettime*, maintaining that the add-on didn't break any law since "it only provided a user interface link between the web sites Amazon.com and thepiratebay.org". Moreover, they considered the project as "as a practical media experiment and artistic design investigation into the status of media creation, distribution and consumption on the Internet."

The Ship was hit. We're offline.

mail atttt pirates-of-the-amazon.com

Wanna stay updated?
Enter your email here:



Fig. 57: Screenshot from the Pirates of the Amazon's website after the take-down, 2008.

After the take down, the anonymous creators of the plugin turned its website into a repository of the projects' documentation since, according to them, the value of the project lied in the reactions it gathered. They categorized the discussion by such keywords as 'parody', 'education', 'censorship', 'humor'. One of the comments under the 'freedom of art' label reads: "[...] Good art often puts common subjects in new relationships and makes you think about them differently. Good art can also expose a problem which society has not solved. This works on many levels. When art threatens power it is often banned by those in power" ("Documentation" 2008).



Fig. 58: Diagram showing the functioning of Dear Jeff Bezos by Johannes P. Osterhoff, 2013-14.

38 http://web.archive.org/web/20100711152012/http://digg.com/tech_news/Shop_Amazon_For_Free_w_Firefox_Add_on_Linking_to_Pirate_Bay.

In the performance Dear Jeff Bezos (2013-14)³⁹, the “interface artist” Johannes P. Osterhoff reflected on the acquisition and control of reading data by Amazon. Whenever Osterhoff set a bookmark on his Kindle, an email containing the book’s title and the current position in the text was automatically sent to Jeff Bezos, CEO of Amazon. At the same time, the passages were also published in the website bezos.cc and so they became publicly available.



Fig. 59: Screenshot from bezos.cc, publicly available archive of the Dear Jeff Bezos performance.

In this way, the artist exposed the company’s ability — thanks to the Whispersync technology⁴⁰ — to know at any time which books are read by its customers, which parts of them, at what pace, etc. In order to do this, Osterhoff needed to circumvent the restrictions preset in the device and thus acquire full control of it. The performance represents a sharp criticism of Amazon’s use of data, in Osterhoff’s words (2013): “Companies like Amazon are interested in exclusive ownership of data, because with this exclusivity comes its value. As a user of such services, one loses not only control but also authorship of the data one generated. To make the data I generate public, is to devalue it.” At the same time, Osterhoff’s work is an invitation not to slavishly follow the functional paths dictated by interfaces, but rather to make a conscious and critical use of devices, appropriating them in line with the principles of critical making (cfr. 2.3.4).

39 <http://bezos.cc/>.

40 Whispersync is employed to synchronize the reading position among different devices. In this way, a user can switch between her mobile and laptop without the need to look for where she interrupted the reading.

3.5. Reception — Questioning Controlled Consumption: Responses to Tracking, Control, and Access

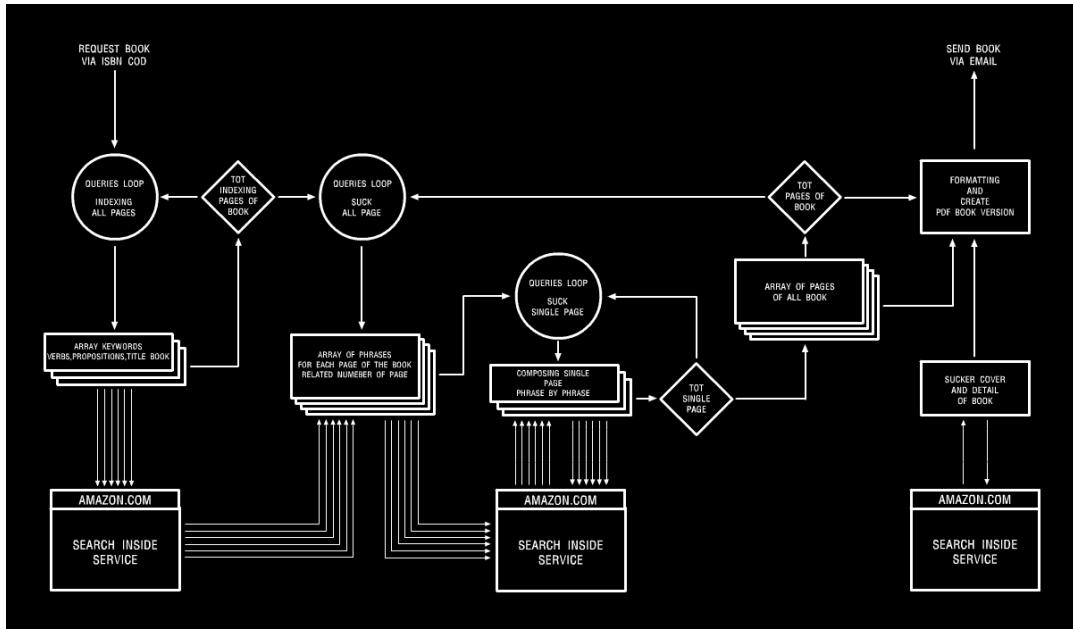


Fig. 60: Diagram showing the functioning of Amazon Noir, 2008.

Amazon Noir⁴¹ is a project developed by Paolo Cirio, Alessandro Ludovico, and the Austrian collective Übermorgen in 2008. As Ludovico declares (2012, 134), their plan “was to explore the boundaries of copyrighting text, and to examine the intrinsic technological paradox of protecting an electronic text from unauthorised copying.” The group exploited Amazon’s ‘Search Inside the Book’ function, which allows customers to have a customized preview of books through snapshots of their content. A software developed by Paolo Cirio was capable of extracting the entire text of the book by recursively using Amazon’s function with the latest words of each sentence. The text was then reassembled in a PDF file.



Fig. 61: *Steal This Book* 'stolen' through the Amazon Noir system shown in an incubator, 2008.

41 <http://www.amazon-noir.com/>.

To make this process visible, the artists created an installation including two projectors showing respectively the logo of the project and a diagram of the software's working, and an incubator containing one of the stolen/retrieved book. The book they chose was *Steal This Book*, written in 1970 by American activist Abbie Hoffman and originally published by his own Pirate edition. When the project was exhibited in Basel, the copy of *Steal This Book* in the incubator was actually stolen.

The materiality of the book, characterized by OCR and positioning mistakes, makes the scanning process visible. In this way the resulting books become a materialization of the scraping process. The artists also released a text describing the artwork in which they claimed to have stolen the invisible. They ask: "What is the difference between digitally scanning the text of a book of yours, and obtaining it from Amazon Noir? There is no difference" (Ludovico, Cirio, and Übermorgen 2008).

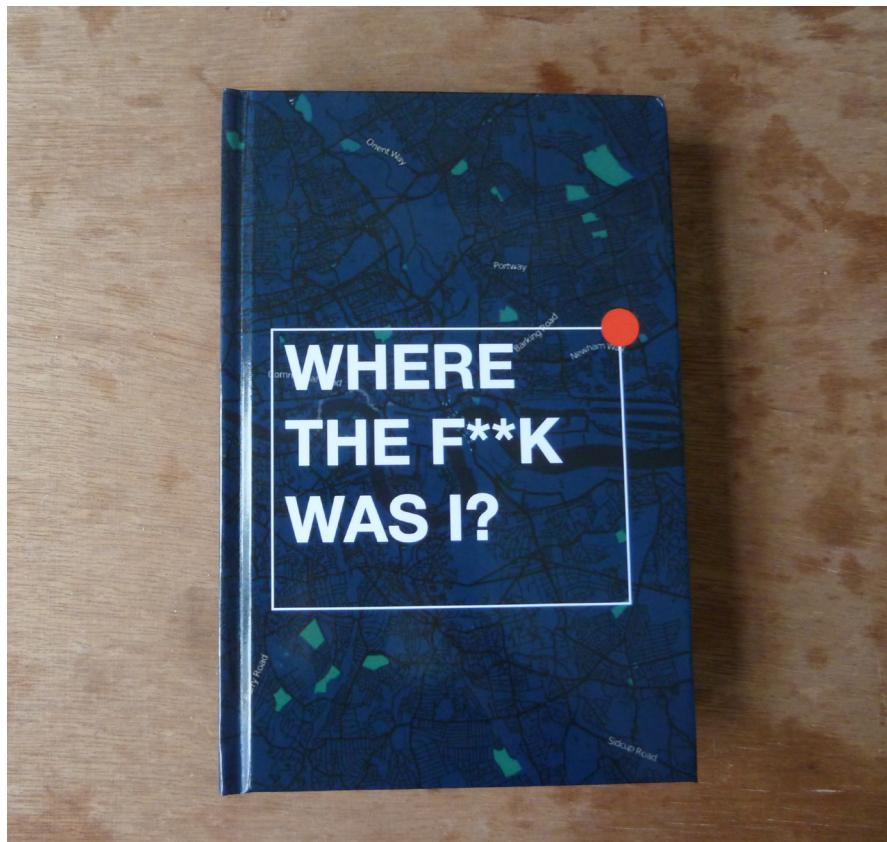


Fig. 62: *Where The F**k Was I?*, James Bridle, 2011.

In 2011, English artist and technologist James Bridle made a book entitled *Where The F**k Was I?*⁴². The volume includes 202 geographic maps showing every location he visited in about a year, accompanied by brief notes. Bridle did not need to systematically collect the necessary data, because they were automatically recorded by his Iphone without requiring any kind of consensus.

42 <http://shorttermmemoryloss.com/portfolio/project/where-the-fk-was-i/>.



Fig. 63: *Where The F**k Was I?*, James Bridle, 2011, detail.

Such default processes are constantly increasing as they foster the continuity of the interactions among different softwares, devices, and services. And the frequent absence of feedback is justified, according to the dominant design philosophy, by the intention of sparing the user from unnecessary distractions. The use of geographic data by Bridle is not an isolated case: in fact there are several projects of site-specific literature, digital literary works whose content varies according to the user's location.



Fig. 64: *The Man Who Agreed to the Apple EULA*, Florence Meunier, 2015.

Designer Florence Meunier employed the materiality of print to call attention to the Apple iCloud EULA (End User License Agreement), a relevant document that legally binds users to certain rights and duties but, nonetheless, is well known for not being read because of its length and bureaucratic style. Users are generally prompt with the text on digital devices and notoriously tend to immediately accept the conditions by simply pressing a button.

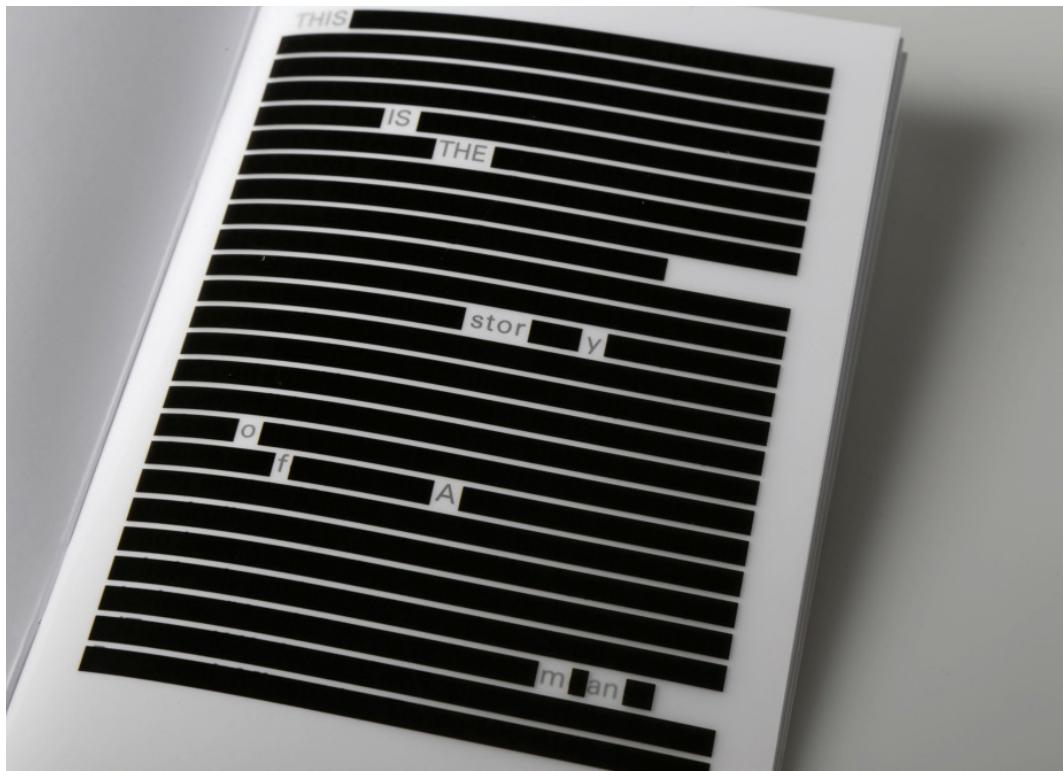


Fig. 65: *The Man Who Agreed to the Apple EULA*, Florence Meunier, 2015.

Under the guidance of Mark Zurolo during the Graphic Design course at Central Saint Martins in London, Meunier designed a book entitled *The Man Who Agreed to the Apple EULA* (2015)⁴³, which reports the whole license agreement in print. Each page is anticipated by another one with black blocks that hide the whole text apart from a few words. In this way, Meunier creates a secondary, parasitic narrative based on the text available in the agreement. As the designer herself says: “The aim is to slightly guilt the user into reading, or simply amuse and therefore interest them” (Meunier 2015).

In another project, entitled *The Physical Book Terms and Conditions*⁴⁴, Meunier applies a similar ‘materiality shift’ in order to reflect on the mutations involved in ebooks’ ownership. To such extent, she printed the content of the Kindle ebooks’ license and applied it to physical books by changing a few passages. The superscript next to each sentence explains the project.

Several of the discussed projects can be considered ‘conversation pieces’, prototypes or actions whose goal is to provoke a debate around the issues they want to address. In this sense, they escape the logic of direct innovation but they are situated in a speculative space where they can investigate the current socio-technical landscape, with its peculiarities and implications. These projects have a strong communicative value since they bring aspects of digital publishing rarely addressed by designers and publishers.

43 <http://florencemeunier.com/The-Man-Who-Agreed-to-the-Apple-EULA>.

44 <http://florencemeunier.com/The-Physical-Book-Terms-and-Conditions>.

3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content

With books ready to be shared, meticulously cataloged, everyone is a librarian. When everyone is librarian, library is everywhere (Mars 2012).

In this section, I look at works that focus on the survival phase of the publishing cycle, projects that actively ask what happens once a publication exhausts its primary function of being sold and read by a single customer and enters either in the library system or it simply reaches the purgatory of private bookshelf or data directory. According to James Bridle (2010), books become souvenirs of the reading experience. The survival phase does not only apply to physical books that are then digitized, but can also characterize the life of digital-born content that easily exceeds and goes to the bottom of social streams, e.g. Facebook statuses or tweets from years ago, posts from abandoned blogs, etc.

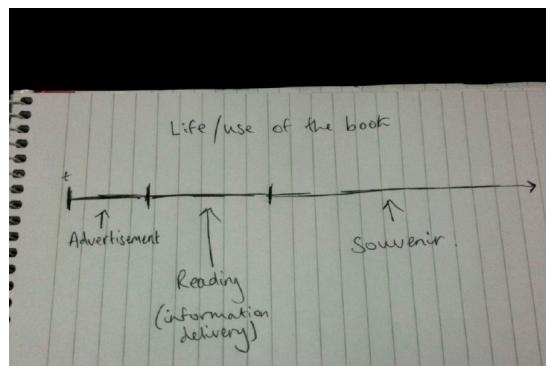


Fig. 66: The Life/Use of the Book, James Bridle, 2010.

In particular, I analyze projects in which collecting, reorganizing, and recontextualizing pre-existing material in novel ways play a crucial role. The effects of such recontextualization are discussed, especially the ones regarding the process of digitization of printed matters. Finally, I look at case studies in which the publishing practice corresponds to an increased accessibility toward obscure, forgotten, or lost materials. The library, both as a concept and as a physical institution, plays a crucial role here. Croatian artist and activist Nenad Romić (aka Marcell Mars) developed the concept of Public Library in the context of his Memory of the World project. According to Mars (2010), the main requirements of the public library are:

- free access to books for every member of society;
- the presence of a library catalog;
- the activity of a librarian.

Mars states that “The public library is a part of these invisible infrastructures that we start to notice only once they begin to disappear.” In fact, the public library is currently endangered by “commodification of knowledge, education, and schooling (which are the consequences of a globally harmonized, restrictive legal regime for intellectual property) with neoliberal austerity” (Mars, Zarroug, and Medak 2014). The authors point out concrete examples of the artificial limitations of the public library in a digital realm characterized by DRM and legal

bindings that avoid free access for members of the society. The values that brought to the original development of public libraries can only be preserved by acts of civil disobedience. The authors refer to four online platforms that represent such attitude:

- Monoskop, a repository of “writings on art, culture and media technology”;
- AAAARG, a collaborative repository with over 50.000 books and texts created by artist Sean Dockray;
- Library Genesis, an online repository with over a million of user-contributed books;
- UbuWeb, an infamous online archive of avant-garde art curated by poet and writer Kenneth Goldsmith.

An important corollary of the Public library concept is the one of “amateur librarian”. The amateur librarian searches for a wanted book on the aforementioned platforms, takes care of the metadata of the book and therefore of the catalog that is automatically generated by softwares such as Calibre. Furthermore, the amateur librarian takes care of the digitized books by fixing the OCR or splitting spreads. Finally she adds items to the public library by scanning printed books.

SCANNING LABOR

In the digital age most of the possibilities of survival for books derive from the digitalization of printed tomes. This happens both at industrial level — with both private enterprises such as Google Books and public ones like the Internet Archive — but also at an individual, and often amateurish, level.

These amateurish activity is not intrinsically opposite to the one carried out by companies or big institution. In fact, the Internet Archive allows users to upload their own collections of books that adds up to their main one. According to archivist and professor Rick Prelinger (2012) — who had also partnered with the Internet Archive, amateur archiving is crucial since “Vernacular archival practices by ordinary people are more persistent than standards and workflows of professional archivists.” According to Bridle (2014), the labor involved in the scanning process can be seen as a successor to the one involved in Gutenberg’s printing press:

The same human action, pressing down on a lever to impress words on to a page [...] can be seen again in the true successor to Gutenberg’s transformative device, the book scanner. Pressing down on a lever raises a book up, pressing it against a glass plate to flatten the pages. A pair of digital cameras fire as one, and the book is digitized, the words uploaded, the text returned to light.

Bridle is referring to the operation of a scanning machine. Among the diverse models available, there is one that particularly suits the needs of non-institutional and independent scanning initiatives. The DIY Book Scanner, created by Daniel Reetz in 2009, is an open-source device that allows to scan books without breaking them. The DIY Scanner project also includes a series of softwares to clean the pictures and collate them in a single PDF file. In Reetz’s (2014) words,

Five years ago we built our first book scanner from salvage and scrap. Book digitization was the domain of giants — Microsoft and Google. Commercial book scanners cost as much as a small car. Unless you chose to destroy your books in sheet-feed or flatbed scanners, there

3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content

was no safe and affordable way to preserve the contents of your bookshelf on your e-reader. Collectively, we tried to fix that. Over 2,000 people contributed more than 350 designs and thousands of lines of code at diybookscanner.org.

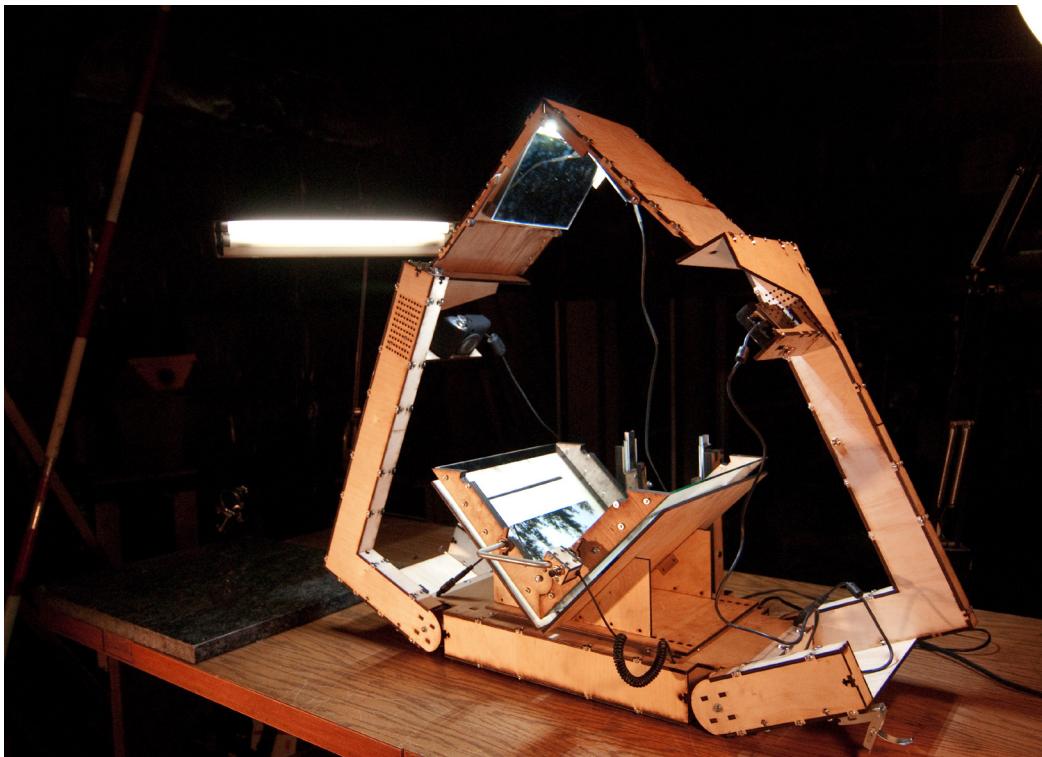


Fig. 67: DIY Scanner. Photo by Daniel Reetz.

One of the projects that aimed at making the scanning process easier for amateur is the Scanbox⁴⁵, envisioned by Phil Bosua in 2012. Scanbox is described as “an easy to use, affordable and unbelievably portable scanning box that uses your smartphone’s camera to take amazing high quality scans. It’s easy to set up and packs down flat to easily fit into your bag or brief case” (“Scanbox - Turn Your iPhone into a Portable Scanner” 2012). The realization of the product was made possible by a crowdfunding campaign on Kickstarter which raised \$184,499, more than ten times of the requested amount.

The final version of Scanbox was designed by Phil Bosua, Ben Hillier, and Luke Allen and is made of laminated card including magnets to keep the actual box stable. Each Scanbox was sold at the time for 15 dollars. A pro version of Scanbox includes LED lights on the inside to lighten the scanned documents⁴⁶. Scanbox combines the action of scanning with the simplicity of taking photos with the smartphone. It also eliminates the need for a specific device solely devoted to the scanning practice. In this sense, it contributes to the convergence of many functions that were previously specialized into the smartphone.

45 <https://www.kickstarter.com/projects/limemouse/scanbox-turn-your-smartphone-into-a-portable-scanner>.

46 Similar products existed before the Scanbox, such as the Steady Stand 200 or the Simp-Q, both focused at photographing three-dimensional products.



Fig. 68: The Scanbox in action.

The biggest enterprise to digitize book at an industrial level is the Google Books project by Google, launched in 2004 as Google Print⁴⁷. While browsing through the pages scanned by Google Books is not uncommon to come across the traces of employees of Google: the so-called ScanOps. In an eponymous series (2012 - ongoing)⁴⁸, this reality is investigated by artist Andrew Norman Wilson, author of *Workers Leaving the Googleplex* (2011), a documentary in which the deep hierarchical divisions of the Mountain View giant are described from the inside as Wilson was a Google contractor before being fired.



Fig. 69: The Inland Printer - 164, Andrew Norman Wilson. Inkjet print on rag paper, painted frame, aluminum composite material.

47 As of April 2013, Google Books scanned more than 30 millions book titles (Darnton 2013), more than 10 times the amount of books digitized by the Internet Archive as of July 2013 (Hoffelder 2013).

48 <http://www.andrewnormanwilson.com/ScanOps.html>.

The images of the hands, shown outside the screen, shed light on the economic and social model that is hidden behind the ‘immaterial’ service which is used on a daily basis by users worldwide. Wilson produced a series of prints in which errors in the scanning process are visible. Sometimes these are glitches that result in a distorted image, but often the images include the presence of the ScanOps through their hands wearing vinyl protections for fingers⁴⁹. The title of each photograph is simply the title of the book accompanied by the page number. Photographs are shown inside of hand-painted frames, which color is sampled from the picture. In this way, framing becomes both a material form of hand-labor that relate to the pictures and a conceptual presentation of these. In this respect, Wilson (quoted in Solon 2014) states:

It didn't feel right to just publish them on a blog. I wanted to rematerialise them as a book and as framed prints. [...] But I'm just looking at the signs of labour that produced the scans. [...] We see their hands in detail, but don't know who they are, what their stories are and how they go about their job. I take those images and turn them into art objects. I am OK with that as a problematic condition of their existence.



Fig. 70: The Inland Printer - 152, Andrew Norman Wilson. Inkjet print on rag paper, painted frame, aluminum composite material.

On ArtForum, Daniel Quiles (2012) maintains that “A circuit is completed from actually existing labor to Internet circulation to a highly charged, even problematic art object — an unstable mixture of proof and craft.” Besides the print series, Wilson also designed a publication in an edition of 10 including nine archival inkjet prints encased in a silver static bag together with dust free cotton handling gloves.

49 There are several projects that focus both on the collection of Google Books glitches and workers’ hands. Among them, The Art of Google Books blog maintained by Krissy Wilson (2011- present), *Google Hands* paperback by Benjamin Shaykin (2009), *Apparition of a distance, however near it may be* book by Paul Soulellis (2013).

The project Copystand Books (2014) by Stephanie Syjuco investigates the digitization of printed books in a performative way. During a residency at Kronika Center for Contemporary Art in Bytom (Poland), Syjuco built a custom copystand setup made out of a lamp stand, a bikini swimsuit top, a masking tape, a wooden spoon, an elastic hairband, and a cheese grater. She used the copystand to scan a collection of nine rare books selected from the gallery's bookstore, which was about to be closed. The resulting PDFs were then uploaded on a dedicated website⁵⁰.



Fig. 71: Copystand by Stephanie Syjuco made with a lamp stand, bikini swimsuit top, masking tape, wooden spoon, elastic hairband, and a cheese grater.

50 <http://copystandbooks.tumblr.com/>.

3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content

The artist purposely avoided to clean the images from the traces of the scanning procedure, highlighting in this way the labor involved in the digitization process. As Syjuco (2014) states,

By rephotographing the works, it is akin to instigating an independent, small-scale archiving and distribution network, but infected with the artists' own hands and identifying the labor and tactility involved in every turn of each page.

Perhaps this activity also suggests an intimacy akin to reading over someone else's shoulder.



Fig. 72: One of the books scanned by Syjuco with her custom-made copystand.

The hands also add a temporal and even emotional dimension to the process as sometimes they seem to communicate attachment to specific pages. The crudity of the installation, that holds nonetheless a sculptural value, visualizes with a dose of irony the spartan DIY dignity of homemade scanning.

Special Collection (2009)⁵¹ is a project by graphic designer Benjamin Shaykin developed as part of his MFA thesis at the Rhode Island School of Design (US). Shaykin partially recreated twelve books found on Google Books as hand-sewn printed pamphlets. The books, printed at their original size, include all the errors due to the scanning process. Among them, “the scanner's hand, holding down and obliterating the page; type and illustrations which have degraded and blurred to the point of illegibility; pages scanned while in the process of being turned; fold-out maps and charts that were scanned while closed” (Shaykin 2009).

51 <http://benjaminshaykin.com/Special-Collection>.

3. The Praxis of Experimental Publishing: Thematic Case Studies

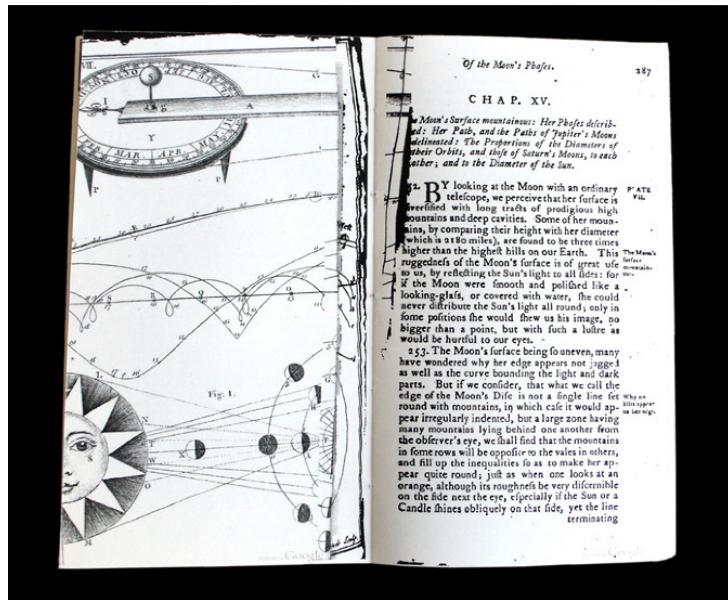


Fig. 73: Spread from Special Collection, Benjamin Shaykin, 2009.

Bringing back the books to their physical form makes such errors more visible and less considerable as glitches. Also the Google's ownership of the process becomes more evident as the "digitized by Google" watermark is preserved on every page. Shaykin (2009) maintains that "Special Collection asks us to consider the contradictions and unintended consequences of technological advance."



Fig. 74: Special Collection, Benjamin Shaykin, 2009.

3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content



Fig. 75: Digitized by Google stamp, Charles Mazé and Coline Sunier (2010).

Similar to the materiality shift produced by Shaykin, Brussels-based designers Charles Mazé and Coline Sunier created in 2010 a physical version of the 'Digitized by Google' stamp. By making such a label a stamp, they playfully acknowledge the appropriative tone of Google's digitizing enterprise.

COMMUNITY AND ACCESS

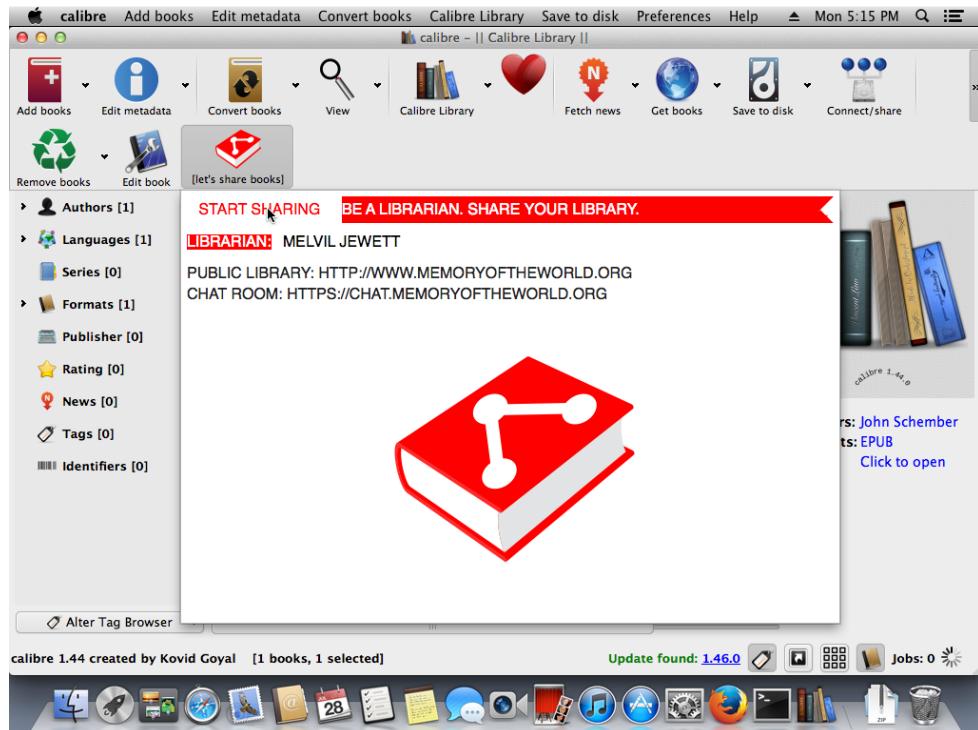


Fig. 76: Screenshot from [et's Share Books] plugin for Calibre, Marcell Mars.

Marcell Mars is also the creator of [let's share books]⁵², a plugin for book management free software Calibre that allows to share a user's personal library over the internet. [let's share books] implements a simple interface for connecting multiple computers over a network which is not local anymore.



Fig. 77: An instance of Biblioteca (2013).

Biblioteca⁵³ is an ongoing project started in 2013 by students and alumni of the Piet Zwart Institute of Rotterdam⁵⁴. Born out of the need of sharing digital text relevant to common study without going into copyright issues by putting them online, the group of PZI students decided instead to develop a localized solution. Biblioteca is a digital library, metonymically hidden inside a physical tome, based on Raspberry Pi and other open-source technologies that is accessible — both for upload and download — via wifi.

The group describes Biblioteca as “a framework to facilitate the local distribution of digital publications within a small community [...] Biblioteca proposes an alternative model of distribution of digital texts that allows specific communities to form and share their own collections” (“Biblioteca” 2013). The group also produced a manual to build instances of Biblioteca from scratch and it also run several workshop during festival and events where visitors were encouraged to upload and download books, building, in this way, a collaborative collection which is specific to the themes of the event.

52 <https://www.memoryoftheworld.org/blog/2014/10/28/calibre-lets-share-books/>.

53 <http://biblioteca.info/>.

54 Current Biblioteca collaborators include: Michaela Lakova, Lucia Dossin, Yoana Buzova, Roelof Roscam Abbing, André Castro, Lídia Pereira, Ana Luísa Moura, Lasse van den Bosch Christensen.

3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content

COLLECTING, RE-CONTEXTUALIZING, REMIXING



Fig. 78: *Roger Ebert — Collected Wikipedia Edits*, Quenton Miller, 2014.

Australian artist and documentary filmmaker Quenton Miller focussed on personal contributions to Wikipedia for his book *Roger Ebert — Collected Wikipedia Edits* (2014). Roger Ebert was a well-established film critic, historian, and journalist awarded with a Pulitzer Prize. Apparently, between 2004 and 2009 he edited several articles on Wikipedia under the username 'rebert'⁵⁵. Miller collected these edits and made a posthumous print book out of it, actually realizing a single copy. The edits are presented on the opposite page to the original lines, accompanied by the date and time they were made. The edits — 18 in total — range from long revisions to mere links to Ebert's own reviews, which were once marked as a "possible conflict of interest". The project, similarly to *The Iraq War* by James Bridle, looks into the way Wikipedia production of knowledge takes place, but in this case is concentrated on a single contributor. Thus, it shows the leveling ability of its review system, where a renowned film critic is at the same level of the average user.



Fig. 79: *Books Scapes*, Julien Levesque, 2012.

⁵⁵ <https://en.wikipedia.org/wiki/Special:Contributions/Rebert>.

In Books Scapes (2012)⁵⁶, French artist Julien Levesque gives proof of the enhanced possibilities of reorganization and remix provided by digital archives. In order to do so, he exploits the capabilities offered by Google Books, incorporating small portions of the scans in Web pages. The result is a series of three landscapes in which various illustrations from books otherwise unrelated are linked to each other. The landscapes work at the same time as collage and visual index (it is possible in fact to click on any individual detail to get to the source).

The Death of the Authors (2012-present)⁵⁷ is an initiative by Femke Snelting and An Mertens, both members of Brussels-based interdisciplinary arts lab Constant. The project promotes an active attitude toward creative works that enter the public domain. Among other authors who died in 1941, Virginia Woolf and James Joyce entered in the public domain in 2012, 71 years after their death. Through an algorithm made with Python and nltk (a suite of libraries and programs for symbolic and statistical natural language processing), the work of the authors is mixed according to several parameters, generating an endless number of mixes.

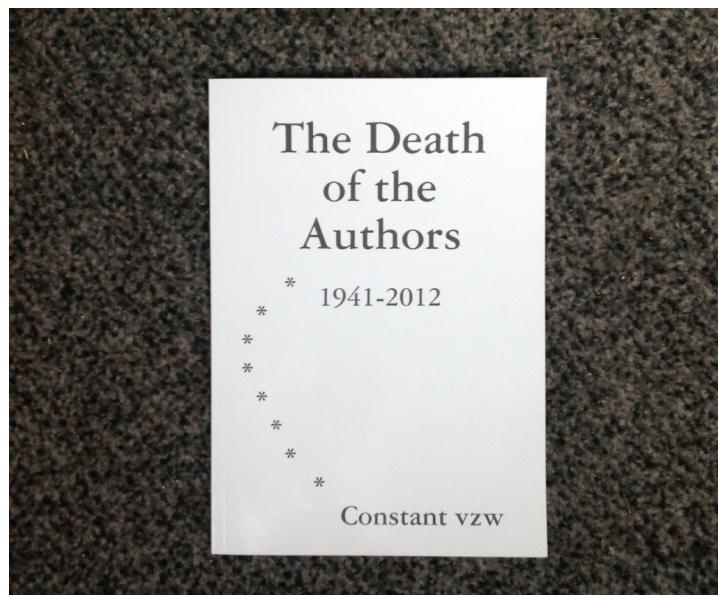


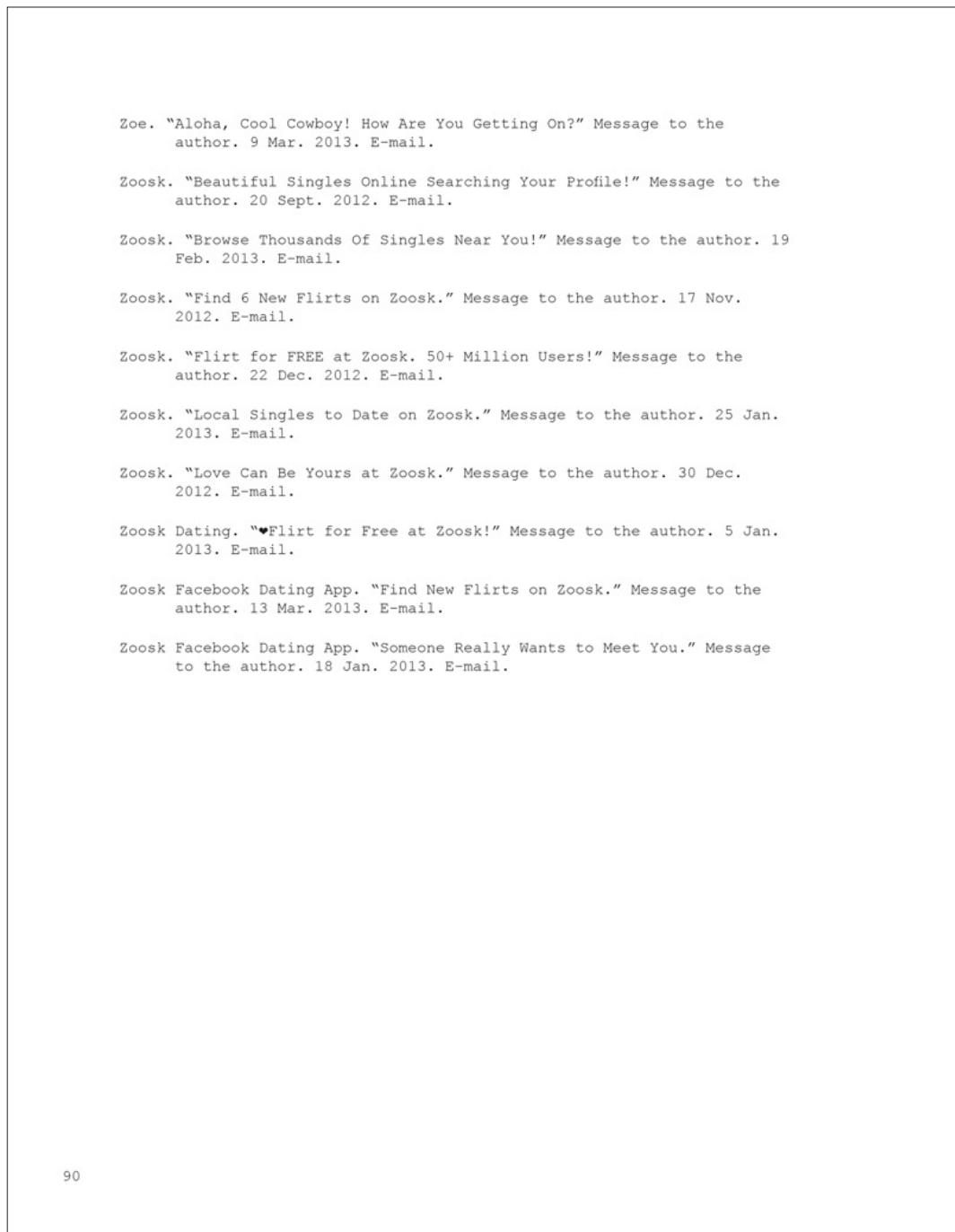
Fig. 80: *The Death of the Authors*, Constant, 2012.

One of the most fascinating aspects of the project is the idea that the script metaphorically mimics the decomposition's process of the bodies under the ground becoming a single entity. This rather macabre metaphor gives insights on how to read the book (or not to), as the source code can be seen a sort of manual to interpret the piece. Paradoxically, the generated text becomes secondary to the dynamics of the script. Going back to the main mission of the project, its strength is demonstrated by the fact that it can be repurposed in many ways, both in terms of input and output. In fact, Constant prepared the 2013 edition of The Death of the Authors, including the work of a musician, a photographer, and a writer.

56 <http://www.julienlevesque.net/books-scapes/>.

57 <http://publicdomainday.constantvzw.org/>.

3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content



90

Fig: 81. Page from *Spam Bibliography*, Angela Genusa, 2013.

In her *Spam Bibliography* (2013)⁵⁸, writer and poet Angela Genusa reorganized the spam she received via email in the form of an academic bibliography, somehow validating automatically generated texts that are commonly considered garbage. The work points to the human reaction to algorithmic reading and writing processes. Nowadays, it's not uncommon to stumble

58 <http://cargocollective.com/angelagenusa/Spam-Bibliography>.

upon bots talking to each other on Twitter, sometimes without even noticing. SEO⁵⁹ has a profound impact on contemporary writing practices. The question is: to what extent do we adapt to these systems? According to Jaron Lanier (2010), the renowned Turing test, more than showing whether a machine is able to think like a human being, manifests how humans lower themselves to a level that is accepted by machines.

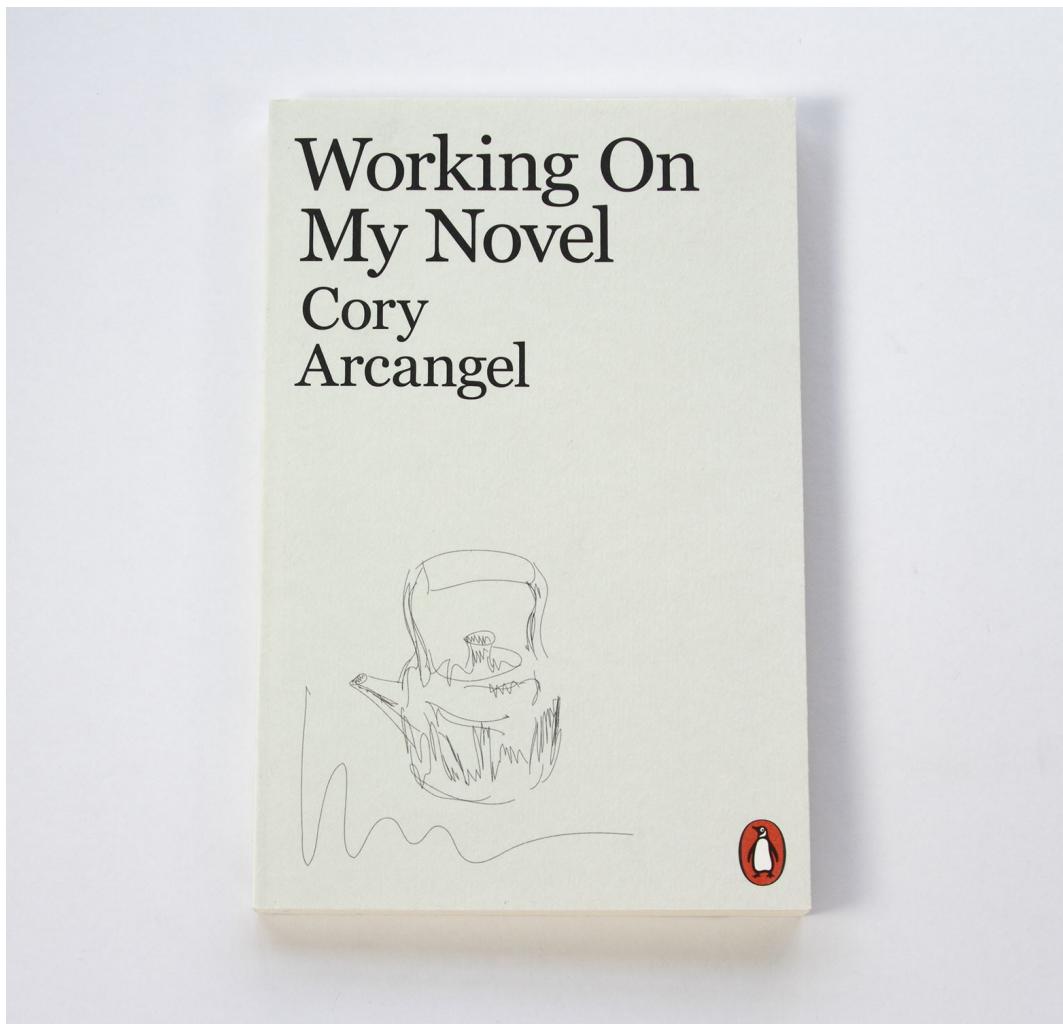


Fig. 82: Cover of *Working on my Novel*, Cory Arcangel, 2014.

Working on my Novel (2014) is a book by U.S. artist Cory Arcangel, published by Penguin. It only includes a selection of tweets containing the phrase “Working on my Novel”. The project is presented to be “about the act of creation and the gap between the different ways we express ourselves today. Exploring the extremes of making art, from satisfaction and even euphoria to those days or nights when nothing will come, it’s the story of what it means to be a creative person, and why we keep on trying” (Arcangel, 2014).

59 Search Engine Optimization, the practice of organizing the information of a website in a way that is properly interpreted by search engines.

3.6. Survival — Re-Publishing the Digitized Book, Re-Contextualizing Forgotten Content

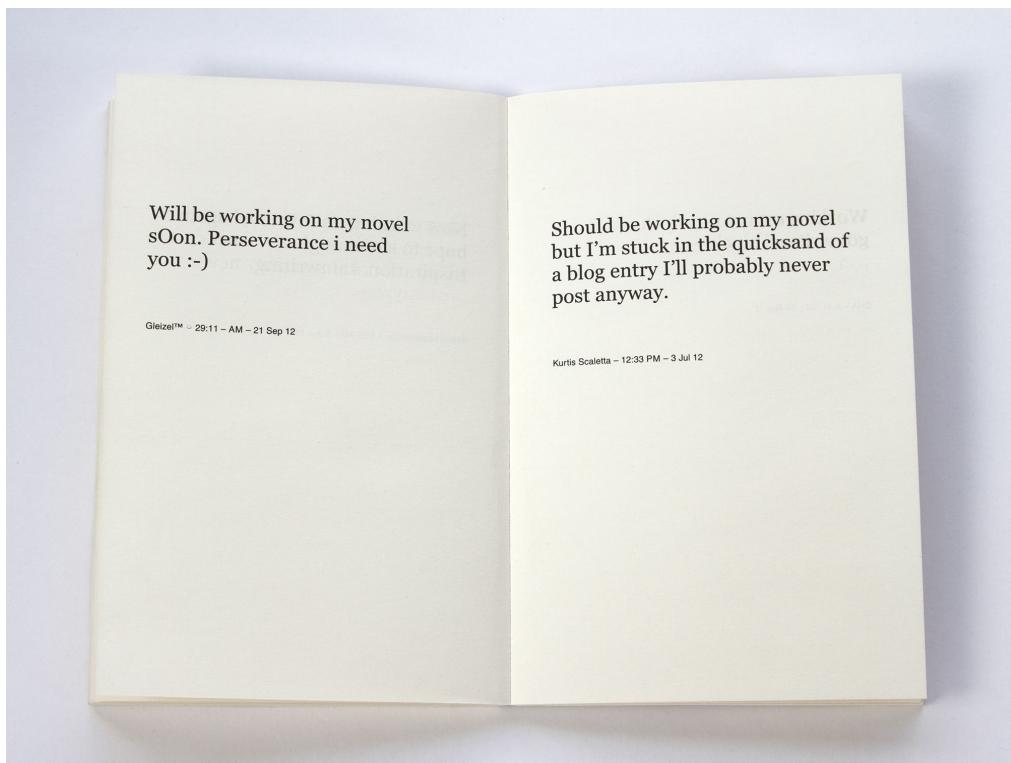


Fig: 83. Spread from *Working on my Novel*, Cory Arcangel (2014).

The interesting aspect here is the short-circuit happening in the literary field. Tweets about the struggle of actually writing a novel are collected by an artist and then — with the consent of the author — those are collected in a book that gets the validation of a well-known publishing house.

#oneSecond (09.11.12 14:47:36 GMT)⁶⁰ is a project developed in 2013 by Philipp Adrian, a graphic designer and web developer based in Basel, Switzerland. The project was initiated while Adrian was a student at HGK Basel, during a typography class supervised by Marion Fink.

For #oneSecond, Adrian collected all tweets — 5522 in total — sent within the same second from all over the world and categorized them in four printed volumes that have more than 4500 pages. To do so, the designer had to buy some of the data from provider Datasift and gather the rest from Twitter, Google, FourSquare, AskGeo's APIs. These data were then laid out automatically thanks to Basil.js, a library that facilitate the scripting in Adobe InDesign. In order to reproduce the tweets written in 42 different languages, 14 different fonts were necessary. According to Adrian (2012):

5522 of those actors all across the world hit the „tweet“ button at exactly the same second. By taking this moment as a frame, this connection becomes visible and by preserving it, each one of those actors emerges out of the immense volume of anonymous data and becomes an individual again.

60 <http://www.philippadrian.com/project/onesecond/>.

Each book focuses on some specific aspects of the tweets and the users. *My Message is...* contains all the tweets ordered by their language, with font size derived from the number of followers of each user. *My Color is...* shows the color chosen by each user to customize her Twitter profile. *My Description is...* shows profile descriptions for each user arranged by their Klout score⁶¹. *My Name is...* includes all the images that users chose to represent themselves.

The projects discussed in this chapter can all be seen as a reinterpretation and an extension of the phase they are included in. Mixing a hand-on approach and critical reflection, these designers and artists demonstrate how their prototypes and proofs of concept can function as props for discussion and eventually policy-making.

61 The “Klout score” is a value determined by the algorithms of Web platform Klout meant to quantify online social influence.

4. Publishing Experimental Publishing

4.1. A Constellation of Online Archives

[...] It would be a constellation of interstitial and polycentric spaces, reflecting affinities and communities of use rather than struggle to position itself as a central aggregator (Smith 2008).

This section is devoted to the analysis of online repositories of avant-garde materials, artists' books facsimiles, and new media artworks. For each of these repositories, I look at their evolution, the practice around they are structured, the communities that form around them, and their size. Furthermore, I analyze the curatorial approach they incorporate through selection criteria and systems of categorization. Finally, I discuss the technologies employed and the design choices in terms of interface, access, and navigation.

The aim of this investigation is to sketch a constellation of repositories and isolate a series of features that can be adopted, enhanced, or avoided in my own online archive of experimental publishing. An important aspect to highlight is that these online repository are very often mutually influenced and aware of their own respective practices. Therefore, they are complementary both in terms of available content and perspective on single items. This overlap reflects the stratification of disciplines around the items; a redundancy that is useful both for preservation and for creating a more comprehensive context around the works.

4.1.1. UbuWeb

UbuWeb¹ is an online archive created in 1996 by artist and writer Kenneth Goldsmith. UbuWeb's focus is "avant-garde" and experimental writings, films, and sounds. Clearly, in this case "avant-garde" is a fluid notion — "I'm not sure what avant-garde is. It's always changing." (Goldsmith and McNeil 2011) — that is constantly reformulated by the archivist and the community around the archive. UbuWeb also functions as a publishing house since it re-publishes digital editions of obscure, out-of-print works and provides a space for niche publications that would be hardly taken in consideration by traditional publishing houses. UbuWeb is independent even if it takes advantage of the support of sympathetic institutions that donate server space or cover domain expenses. In 2011, UbuWeb included over 7500 artists and several thousands of works (Goldsmith 2011c).

¹ <http://ubu.com/>.



UbuWeb | Winter 2015

search

- UbuWeb Top Tens
- Twitter
- UbuRadio iPhone App
- Resources
- 365 Days Project
- Aspen Magazine
- Bidoun Presents
- Conceptual Writing
- Contemporary
- Dance
- Electronic Music Resources
- Ethnopoetics
- Film & Video
- Historical
- Outsiders
- Papers
- UbuWeb Radio
- Sound
- /ubu Editions
- Visual Poetry
- Contact

UbuWeb's Partners

Technical, content and moral support for UbuWeb is provided by our partners:

- Art Design Office
- Anthology Film Archives
- Bidoun Magazine - Art and Culture

Sound in Transit We're in the process of moving our MP3 archive from Mexico City to Memory of the World, which is apparently based in a secret location on the Lower East Side of Croatia. It's cranky now, but it should be functional sometime before 2016. Stay tuned here or on our Twitter feed.

In Solidarity with Library Genesis and Sci-hub Share this letter - read it in public - leave it in the printer. Share your writing - digitize a book - upload your files. Don't let our knowledge be crushed. Care for the libraries - care for the metadata - care for the backup. Water the ***** - clean the volcanoes.

Yugoslav Black Wave Cinema (1962-72) Yugoslav Black Wave (also referred to as Black Wave) is a blanket term for a Yugoslav film movement of the 1960s and early '70s. Notable directors: Dušan Makavejev, Zika Pavlović, Šaša Petrović, Zelimir Žilnik, Mika Antić, Lordan Zafranović, Mica Popović and Marko Babac. Their films are known for their non-traditional approach to film making, their dark humor and their critical examination of the Yugoslav society at the time. Curated for UbuWeb by Dubravka Šekulić

The Fox (1975-76) Full run of the shorty-lived legendary conceptual art publication with key contributions by Sarah Charlesworth, Michael Corris, Preston Heller, Joseph Kosuth, Andrew Menard, and Mel Ramsden. [Three issues; PDFs]

UbuWeb Films on Mobile Media After two long years, we are proud to announce that all our films are finally viewable on mobile media (smartphones & tablets), as well as on computers. Special thanks to Ubu volunteers **Meredith Finkelstein** for the coding, **Patrick Stein** for the conversions, and **Art Design Office** for the streamlining and ongoing technical support. We ain't YouTube. As befits the avant-garde, our films are

New Additions:

- **Kalup Linzy** Conversations with Churen: II, IV, V (2003-06)
- **Juan Downey** Nine Videos (1982-90)
- **Judith Berry** Casual Shopper (1980-81); Study for Mirror and Garden (2003)
- **Joseph Beuys** Public Dialogue (1974)
- **The Films of Janet Cardiff** Road Trip (2004); The Killing Machine and Other Stories (1995-2007); After Bahnhof Video Walk (2012)
- **Jeremy Deller and Nick Abrahams** The Posters Came from the Walls (2008)
- **Douglas Davis** Video Against Video (1975)
- **Douglas Gordon** Stooges Burn-Out (1995); Douglas Gordon sings the best of Lou Reed & Velvet Underground (For Bas Jan Ader, 1993)
- **Josiah McElheny** Conceptual Drawings for a Chandelier, 1965 (2005)
- **Jim Shaw** The Hole (2007); The Whole (2009)
- **Josephine Meckseper** 0%

UbuWeb Top Ten December 2015 Selected by The Outdoor Co-Ed Topless Pulp Fiction Appreciation Society

1. Nam June Paik - "Topless Cellist" Charlotte Moorman (1995)
2. Mirjana Abramović - Balkan Erotic Epic (2006)
3. Bruce Conner - Breakaway
4. Aldo Tambellini, Thomas Tadić, Allan Kaprow, James Seawright, Otto Piene, Nam June Paik - The Medium is the Medium (1969)
5. Rubén Gallo - Fidget's Body
6. Jorge Luis Borges - The Mirror Man (1999)
7. George Kuchar - Hold Me While I'm Naked (1966)
8. Jean Genet - Un Chant d'Amour (1950)
9. Arena - Robert Mapplethorpe (1988)
10. Ken Russell - Always on Sunday (1965)

Ten down-and-dirty pulp novels you should read, from the Outdoor Co-Ed Topless Pulp Fiction Appreciation Society:

1. QUEENPIN by Megan Abbott
2. MONEY SHOT by Christa Faust
3. SONGS OF INNOCENCE by Richard Ales
4. THE FABULOUS CLIPPOINT by Fredric Brown
5. WHEN THE SACRED GINMILL CLOSES by Lawrence Block
6. MIAMI PURITY by Vicki Hendricks
7. THE GETAWAY MAN by Andrew Vachas

Fig. 1: Ubuweb's homepage.

The original goal of UbuWeb was to provide access to obscure works of concrete poetry. The introduction of the graphical web browser allowed to show images; this recontextualization was particularly effective to Goldsmith, who was astonished “by how fresh [concrete poems] looked backlit by the computer screen.” (Goldsmith 2011c). Later, with the evolution of the Web, Goldsmith started to include also audio files of sound poetry and then video files of experimental films. Currently, UbuWeb also includes comprehensive collections of seminal works, like the already discussed “multimedia magazine” *Aspen* (cfr. 1.4.2), whose adaptation for the Web was carried out by Andrew Stafford.

UbuWeb doesn't produce any kind of profit and is based on volunteering. The relationship with institutions is articulated by Goldsmith in the following way: “We're lab rats under a microscope: in exchange for the big-ticket bandwidth, we've consented to be objects of university research in the ideology and practice of radical distribution” (Goldsmith 2011c). Goldsmith often speaks of a community behind the archive, and uses the ‘we’ pronoun. While this makes sense when referring to the users of the archive, it seems more of a strategic attempt to render the archive's entourage as a bigger entity than what it is. This also makes appear Goldsmith as a sort of ‘éminence grise’ behind it. The reality is, as Goldsmith (2010) himself declared in a letter to Bettina Funcke, that UbuWeb is mostly a “one-man operation” that often involves a high amount of labour, like in the case of the Ubu Editions, where an intensive work of retyping and resetting was needed.

4.1. A Constellation of Online Archives

The predominant political goal of UbuWeb is democratic access: “It is our obligation as educators and intellectuals to make sure that the bulk of our production ends up there, preferably with free and unfettered access to all” (Goldsmith 2005). This goal often encounters the resistance of copyright holders that try to protect rare cultural artifacts authored by well-known artists. UbuWeb welcomes the ‘take-down’ requests made by artists themselves but it also constantly receive submissions. Aware of the conceptual limitations of copyright systems, Goldsmith (2002) doesn’t ask permission to add content to the archive. He labels this approach a “radical form of distribution”. He openly admit his own bias in building his subjective notion of avant-garde. And he’s even worried about the institutional power that UbuWeb has gained over the years. He states: “For the moment, we have no competition, a fact we’re not happy about. We’re distressed that there is only one UbuWeb: why aren’t there dozens like it?” (Goldsmith 2011c).

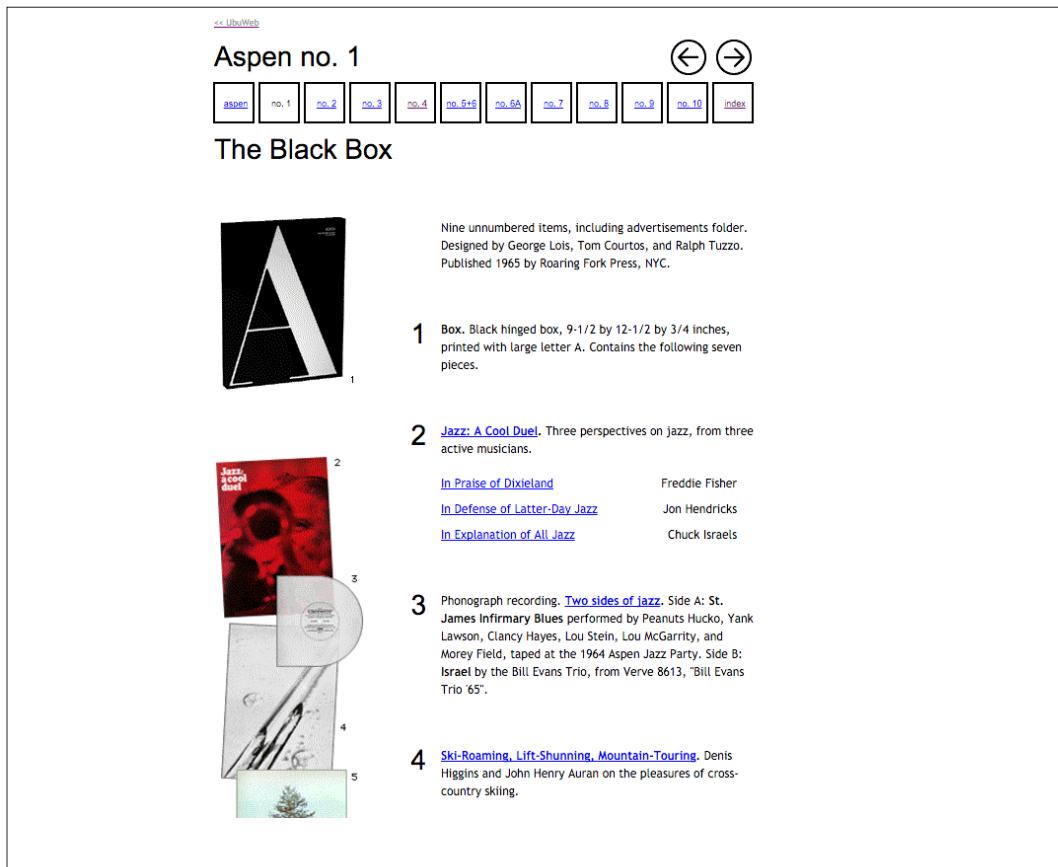


Fig. 2: Aspen magazine collection on UbuWeb.

As already said, Goldsmith’s curatorial criteria are highly subjective. From his interviews a couple of guidelines emerge: “One thing that all the works in Ubu have in common is they are not worth anything monetarily” (Goldsmith and McNeil 2011). At the same time, ‘boredom’ seems to be another relevant criteria for Goldsmith: boredom is a way to describe works that are difficult to experience because deliberately repetitive or dull (Goldsmith 2004). On Ubuweb, quality often seems to correspond with rarity, as in the case of audio files in which the voice of the artist can be heard (Peller 2013, 32).

The organizational principle on UbuWeb is loose and strict at the same time. There are themes like ‘dance’, ‘outsiders’, or ‘visual poetry’, but the works are mostly organized around their authors, as “a set of documents around one name” (Peller 2013, 31). The kind of materials that can be accessed on the site represent “a different sort of revisionist art history, one based on the peripheries of artistic production rather than on the perceived, or market-based, center” (Goldsmith 2011c). As a result, there is a post-modern vein in the interaction among materials: “poetry, music, film, and literature from all periods encounter and bounce off of each other in unexpected ways.”

As Agnès Peller (2013, 10) points out, text is preeminent in the site’s interface. This echoes the origin of the archive both in terms of content (concrete poetry) and technical context (the so-called ‘document Web’). In fact, still in 2007, more than ten years after its creation, UbuWeb has maintained a basic technological infrastructure without employing CMSs or databases:

UbuWeb is a flat HTLM [sic] 1.0 site. There is no programming behind it, absolutely everything is written in BBedit by hand. You know I want to keep the site very basic, because what really is new is this radical sense of distribution (Goldsmith 2007).

This is a conscious decision in order to be independent also in technological terms. This frugality in the infrastructure is echoed by the poor quality that often characterizes the archived media. Here the emphasis is on circulation: Goldsmith speaks of “nude media” referring to “bare” files, divorced from the context that lent them authority and meaning, and which thus move ‘defrocked’ through file-sharing systems, leading them to pitch up in unexpected places” (Goldsmith quoted in Peller 2013, 10). Furthermore, the poor quality of the artifacts allows Ubuweb’s items to be complementary to the high-quality ones that are published and distributed by official institutions. For all of these reasons, together with the fragility of the archive itself (constantly risking to be shut down), UbuWeb can’t be seen as a rigorous preservation effort. Finally, Goldsmith has developed a series of strategies to ‘activate’ the archive. Each month he asks a fellow artist or researcher to select a list of ten items from the archive. He also reproduces artworks during lectures and podcasts. Furthermore, there are external approaches to serendipitously discover items on UbuWeb like Ubu Roulette², which shows a random page from the archive.

4.1.2. Rhizome Artbase

The Artbase³ is an online archive of digital art created by Rhizome, an art organization founded in 1996 by artist Mark Tribe and focused on born-digital art. The Artbase was created in 1999 “to preserve works of net art that were deemed to be ‘of potential historical significance’” (“Artbase”). It contains over 2,500 artworks that enter the archive “through artists submissions, annual commissions and special invitation.” The typology of artworks in the archive is very diverse, including works that employ software, code, websites, videos, but also performances and installations. Since after a recent redesign several features of the Artbase

2 <http://ubu-roulette.com/>.

3 <http://rhizome.org/art/artbase/>.

4.1. A Constellation of Online Archives

were removed, this analysis focuses on the previous version of the website⁴. The main focus of the Artbase is preservation:

Modern computers are unable to perform many of the artworks as they were originally experienced. This inability demonstrates a significant crisis in digital social memory that Rhizome is responding to with its Digital Preservation program, led by Dragan Espenschied. The works in the ArtBase, vibrant and technically diverse, provide a laboratory for the development of forward-thinking tools and strategies so that these works may be reperformed in legacy environments, giving contemporary users a sense of their initial form (“Artbase” 1999).

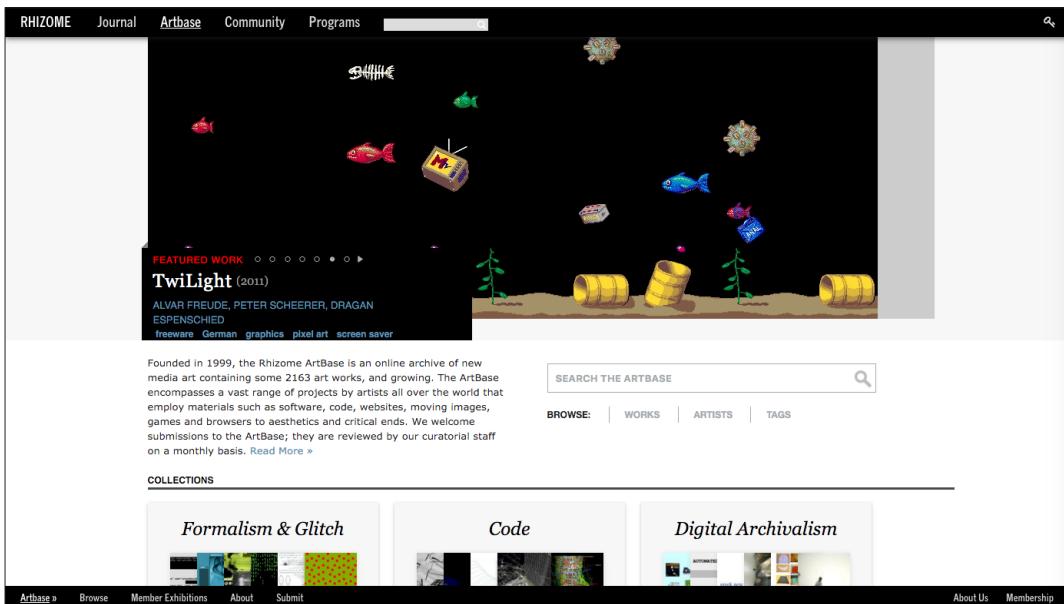


Fig. 3: Rhizome Artbase’s homepage.

Works in the Artbase are stored into Rhizome’s servers, then there is a phase of verification that the component of the piece are still working (e.g. broken URLs), and these are fixed by the team of archivists. The works are then also hosted on the ArtBase itself, together with their technical and historical context. All the information is made accessible to other institutions. The Artbase points to the original online location of the work as long as this is functioning; if not, the archived version becomes the primary link. Similarly, source code is preserved, since it is “inextricably bound with the artist’s process and practice, and exemplifies the technological and cultural landscape in which the work was created” (“About the Rhizome ArtBase” 1999). However, in order to allow the reproduction of a work with contemporary technologies, a separated and updated version of the source code is created. One of the preservation strategies adopted by the Artbase is emulation, understood as “writing a new piece of software for a future computer that causes that computer to mimic, or emulate, all of the hardware behavior of an earlier computer” (Rinehart 2002, 16). This strategy is not the only possible one and doesn’t solve all the complexity of the archival process. For instance, as Rinehart points out, emulation is mostly focused on stand-alone computers instead of networks.⁵

4 <http://classic.rhizome.org/artbase>.

5 At the time of writing, Rhizome is experimenting with works preserved in the Artbase by showcasing them

In 2002, Rinehart provided some guidelines to carry out an archival practice able to preserve accessibility to the works. Considering emulation crucial, Rinehart proposes the use of three different types of metadata — descriptive, administrative, and technical — related both to the artwork *per se* and the technologies it is based on. The deriving scheme has three main functions:

[...] standardized core cataloging data for management and access; documenting the original state of the work (at time of submission to ArtBase); and recording information needed for future emulation (Rinehart 2002, 16).

As Ward Smith (2008) notices, the challenge with describing the technological features of an artwork is “to resist the wholesale appropriation of all electronic and scientific equipment catalogs, yet still be able to effectively describe the work.” Such cataloging approach needs to solve the issue of branded and proprietary technologies, generally not recognized by bibliographic controlled vocabularies. It is also crucial to consider the fact that “the actions of external parties (developers, corporate bodies) directly affect the ability to access and experience an artwork” (Fino-Radin 2011, 6). Mediation is thus at the same time an issue addressed by the work, an aspect to consider when cataloguing it, and an agent that plays a role in its preservation and accessibility.

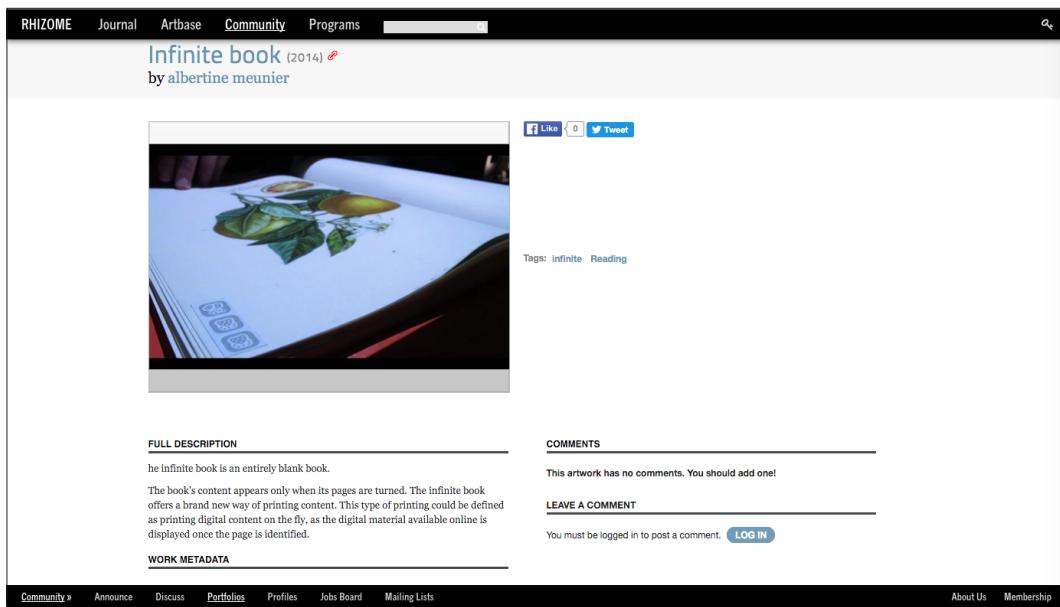


Fig. 4: A work archived in the Rhizome Artbase.

Another relevant point addressed by Smith has to do with the framing of ‘New Media’ artworks. He refers to some scholars who suggest to consider the work not as its physical instantiation, but as a score. This perspective is fascinating because it allows to recreate a work with new technologies as it happens with music, but it doesn’t address the role of the materiality. Furthermore, the preservation effort becomes in this case mostly a matter of interpretation.

in the institution’s homepage.

4.1. A Constellation of Online Archives

Ben Fino-Radin (2011, 8-14) describes three main “inherent vices” of new media art that have consequences on the archival process. Diffusivity, one of them, “refers to works whose data is not contained within one simple object, works that reference external databases, or dynamic and real-time data sources. Diffusivity also refers to works that do not exist solely in one location, but as a series of actions over a variety of locations and platforms.” The other two are data obsolescence and physical degradation. Diffusivity characterizes several works of experimental publishing, and such feature emphasizes their performative nature.

To overcome these vices, Fino-Radin proposes an archival attitude where the Artbase functions as an educational tool and there is an opt-in open source policy that allows other artists to re-use the code and technologies behind certain works. Such attitude is guided by “the belief that obsolescence is steered by use, and re-use breathes new life into creative works” (Fino-Radin 2011, 20). For each artwork, an image is shown together with primary metadata and tags. Artworks can be also organized within thematic virtual exhibitions. Finally, it is also possible to comment single works.

4.1.3. Artists' Books Online

Fig. 5: Artists' Books Online's homepage.

As its subtitle reads, Artists' Books Online⁶ is “an online repository of facsimiles, metadata, and criticism” created in 2004, directed by Johanna Drucker, and managed by Eric Rettberg. While the archival practice is assisted by several professional librarians and digital humanists, ABsOnline is hosted at the University of Virginia and relies on an Advisory Board consisting of special collections curators, librarians, artists, and scholars. Its main task is to “make sure the project serves a broad community of users, maintains professional standards in librari-

6 <http://www.artistsbooksonline.org/>.

anship, scholarship, and artistic content [...] and to provide advice for creating a long-term, sustainable resource for scholarship and access to materials in this field" ("Artists' Books Online Personnel", 2004). At the time of writing, the repository contains 198 works, both artists' books and journals about the field.

The main selection criteria of the repository is quality: only works that meet certain standards and represent a useful contribution to the field of artists' books are included. The main categorization structure has three hierarchical levels borrowed from the field of bibliographical studies: first, the *work*, corresponding to the "overall idea or concept for the project as a whole" ("About the Project", 2004). This may include things other than what is traditionally understood as a publication, such as a performance. Therefore, a work can't be protected by copyright. Second, a work contains *editions*, which encompass their final text but also information about these and production materials such as manuscripts, dummies, or edition size. Third, an edition includes one or more *objects*, that have specific information like the owner or some unique damages or manufacturing defects. This conventional structure allows to study artists' book within the framework of a larger system that includes other types of bibliographic artifacts. An interesting aspect of ABsOnline is the presence of authored metadata fields. The idea is to highlight the subjectivity of information such as critical commentary or project's statement.

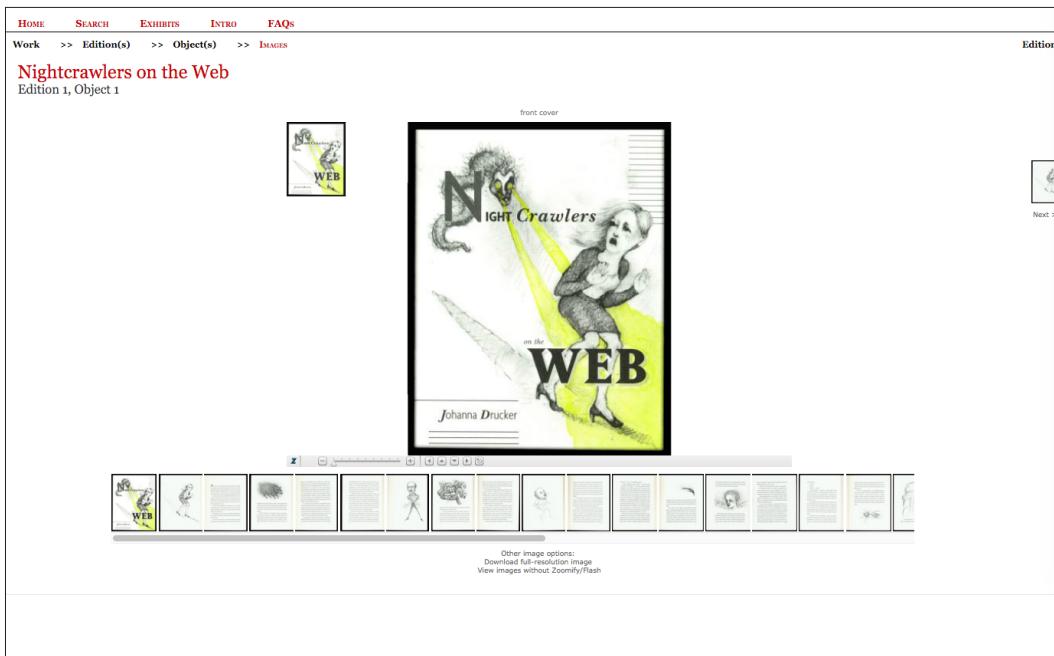


Fig. 6: Artists' Books Online's interface to browse images of a book.

Apart from metadata, it is possible to access images of each object. These include "spine, foredge, covers, end sheets, blank pages, and so on" ("About the Project" 2004). The images can be downloaded from the website as high resolution pictures. ABsOnline also offers thematic exhibits of the works, essays that contribute to the repository collection, and a series of indexes organized by agent of a works on the site, contributor to the site, essay title, exhibition title, and collections.

4.2. The Post-Digital Publishing Archive: An Inventory of Speculative Strategies

ABsOnline is based on an XML architecture⁷ and employs a specific DTD (Document Type Description) that includes all the information needed to classify a work: “The DTD shapes the information in the files and defines the kinds of elements, attributes, and features that the data have. The effect of the DTD is to create consistency across files, but it is also a model of the data, and the conceptual structure is important since it defines the way the objects in the collection are represented” (“View The DTD” 2004). The site offers a full glossary referred to the DTD so that each tag is clearly identified⁸. The dominant theme of the user interface is the index. Currently, there are four main indexes in home page, with works listed by title, by artist, by publication date, and by collection.

4.2. The Post-Digital Publishing Archive: An Inventory of Speculative Strategies

4.2.1. The Evolution of an Online Archive

In this section I discuss the ideas behind the Post-Digital Publishing Archive (in short P—DPA), the online platform I’ve built to collect experimental projects and artworks at the intersection of publishing and digital technology. The word ‘archive’ is partially inappropriate, because I don’t own all the physical artifacts present in the website and the documentation about them is not always comprehensive. However, in this case it suggest an understanding of archiving which is focused on the social, technical, and cultural context around the artifacts. In other words, archiving is here understood as creating context around cultural artifacts. At the time of writing, P—DPA includes 54 works by 76 artists, designers and writers, located between Europe and the United States.

The aim of P-DPA is to systematically collect, organize and keep trace of experiences in the fields of art and design that explore the relationships between publishing and digital technology. In fact, it includes most of the works discussed in the previous chapter. The archive acts as a space in which the collected projects are confronted and juxtaposed in order to highlight relevant paths, mutual themes, common perspectives, interrelations, but also oppositions and idiosyncrasies.

Originally, its online appearance consisted of two main spaces:

- p-dpa.net: the platform used to collect, juxtapose, and categorize the works;
- p-dpa.tumblr.com: the daily log used to quickly aggregate quotes, works, news that were a way or another related to the topic of the research.

⁷ XML, that stands for Extensible Markup Language, “is a markup language that defines a set of rules for encoding documents in a format which is both human-readable and machine-readable” (“XML” 2015).

⁸ <http://www.artistsbooksonline.org/tagDescriptions.html>.

After three years and more than 1000 posts, the tumblr blog is now archived as an EPUB book. I deliberately chose to embrace ambiguity without being affirmative about the selection. Therefore, even if the curatorial angle was fuzzy at times, soon after a pattern started to emerge. In a similar fashion, I started to post articles and works that I considered interesting both in a positive and negative way. After some time, I began to create links between post using a simple 'See also' appendix. This was a way to create micro-histories and interpretation paths.

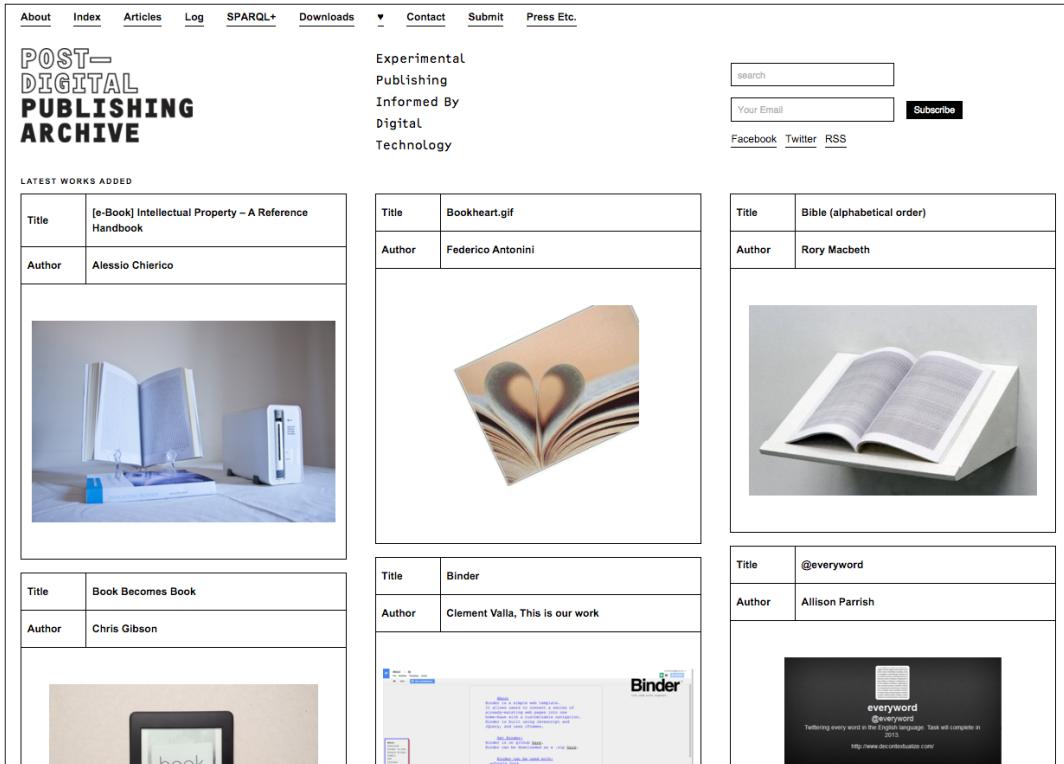


Fig. 7: P—DPA's homepage.

The Tumblr blog proved extremely useful in several ways: first, Tumblr makes it easy to share a reference with other researcher and each time I needed to write about my research I scrolled through it and to serendipitously find suggestions; secondly; it slowly gathered a community of peers interested in the topic from different perspectives; thirdly, it functioned as a probe: the Tumblr and the social media channels like Twitter or Facebook became a means to test ideas.

4.2.2. Curatorial Practice, Inclusion Criteria, and Periodization

Unlike Artist's Books Online, my curatorial angle doesn't require excellence: while the inclusion criteria are primarily thematic, the artist's or designer's reputation is not relevant. Therefore the archive comprises several works by students, amateurs, and outsiders of the communities of practice discussed in the second chapter. Even if it might become a secondary effect, the goal of P—DPA is not to validate the practitioners, so the investigation is targeted towards the speculative tactics and the achieved effects of the works.

4.2. The Post-Digital Publishing Archive: An Inventory of Speculative Strategies

The thematic focus of P-DPA aims at revealing unnoticed relationships and connections between experiences belonging to different fields. These represent the starting point for a conscious critique and a genealogy of experimental publishing employing artworks as landmarks and critical statements. The archive is also an opportunity to create a space for dialogue and exchange between artists and designers. In a context characterized by the so-called information overload, P—DPA adopts slow-paced updating process: each addition to the archive is accompanied by an actual contact with the creator, sometimes followed by an interview.

When selecting the works, digitality is seen as a form of contextualization, rather than as an intrinsic feature (e.g. it must be played on a computer, or it must have been produced by a computer). Even though this is an unstable and ultimately subjective criteria, it is more inclusive, also in terms of historical framing. Two other criteria are considered: *inherence* and *anticipation*. An inherent work should actively question, highlight, or reframe constitutive aspects of publishing in the post-digital age. In other words, it should be genuinely experimental. Of course, this perspective on the works holds a level of ambiguity that is the result of the unique identity of the archive, which point of view is ultimately subjective. Inherence is a fluid criterion in a dialectic relationship with the digital environment. For instance, nowadays we consider copy-paste an inherently digital function, but it has not always been so.

An experimental project that predates the universal spread of digital technology shouldn't be excluded from the archive *a priori*. P—DPA applies a 'post-digital gaze' to experiences that, more or less consciously, anticipate modalities of the digital age. As an example, the "network-enabling" counterculture magazines discussed in 1.4.2 could be considered as tangible expressions of what would later become known as the blogosphere.

4.2.3. Categorization and Metadata as Interpretative Devices

P—DPA's organizational structure borrows from both Artists' Books Online and Rhizome Artbase. Each work is categorized according to a schema that mixes popular metadata ontologies, such as Dublin Core and FOAF, with a custom one. As P—DPA aims to highlight techniques that can be replicated and transformed, taking media into account is not sufficient. It is important to list the technologies involved, both the ones needed to produce the work and the ones needed to reproduce it. So, like the Artbase does, P—DPA lists the core technologies employed in each work.

No less important is the role of platforms, since many works are focused on the services provided by companies like Google or Amazon. While traditional bibliographic systems tend to avoid categorizing an item according to proprietary or custom metadata, here becomes a defining tool in order to fully understand the work's context. The use of metadata is additive: there is no unchangeable *a priori* set of metadata, instead this is constantly updated on the basis of the added items.

4.2.4. Infrastructure, Interface, and Navigation

The screenshot shows the homepage of P—DPA. At the top, there is a navigation bar with links: About, Index, Articles, Log, SPARQL+, Downloads, Contact, Submit, and Press Etc. Below the navigation is the site's logo: "POST—DIGITAL PUBLISHING ARCHIVE". To the right of the logo is a sidebar with the text "Experimental Publishing Informed By Digital Technology". Further right is a search bar, a "Subscribe" button, and links for Facebook, Twitter, and RSS. The main content area is organized into six columns under the heading "INDEX".

Authors	Works	Media	Technologies	Platforms	Keywords
& a m p ;	(Four Favorite) Artists?	Book	Animated GIF	Lulu	access
Abigail Thomas	Books (by Johanna Drucker) Online	Document	Apple Enhanced Dictation	Twitter	algorithm
Alessio Chierico	(e-Book) Intellectual Property – A Reference Handbook	Ebook	Arduino	Google	appropriation
Alison Parrish	@everyword	Email	basil.js	Google Books	augmentation
Ana Luisa Moura	#Occupy Books	Hat	Calibre	Blurb	authorship
André Castro	NoneSecond (09.11.12 14:47:36 GMT)	Image	Conductive Ink	Amazon	bookness
Andrew LeClair	A Room of One's Own/A Thousand Libraries	Installation	ConTeXt	Kindle	camouflage
Angela Genusa	Adobe PDF	Letter	DrawBot	iBooks	collaboration
Annett Höland	Anonymous Press	Letter	E-book	Instagram	collection
Aram Bartholl	Art Post-Internet: INFORMATION / DATA	Magazine	Emoji	Google Play	community
Benjamin Shaykin	Autopian Fiction	Mousepad	EPUB	Wikipedia	control
Bryn Fenemor	Bible (alphabetical order)	Mug	Inkjet printing	PediaPress	digital
Charles Mazé & Coline Sunier	Biblioteca	Newspaper	iPhoto	iPhone	distribution
Chris Gibson		Pamphlet	iTunes Text to Speech	Google Images	DRM
Chris Hamamoto		Performance	JavaScript	iPad	duplication

Fig. 8: P—DPA's index page.

As discussed in the previous section, UbuWeb's infrastructure doesn't include databases or any kind of complex programming. This allows the archivist to maintain a technical independence. In a similar way, P—DPA is based on Wordpress, a widespread open-source CMS, that is easily customizable and has a strong community of active users. The site takes also advantage of an RDFa database that is used to manage the associations between items in a way that is transparent since the metadata are embedded in the HTML files. This means that any user could rebuild the archive's database by simply collecting its single pages. The site also provides a SPARQL+ endpoint that can be queried in order to gather specific sets of metadata⁹. P—DPA adopts redundancy: document and video files are both hosted on its server and uploaded to generalist online archive Archive.org¹⁰. P—DPA's attitude is reflected in its design as well: the 'mosaic' layout of the homepage fosters conceptual juxtaposition. The index page consists of six different indexes: authors, works, media, technologies, platforms, and keywords. The archive also includes a series of articles and essays that are related to the works.

9 <http://p-dpa.net/wp-content/themes/p-dpa/rdfa/endpoint.php>.

10 <https://archive.org/details/@p-dpa>.

4.2. The Post-Digital Publishing Archive: An Inventory of Speculative Strategies

4.2.5. A 'Generative' Archive



Fig. 9: *The Crossing Machine*'s promotional poster.

As said before, the listing of technologies and platforms employed is meant to foster emulation, reproduction, and modifications of archived items. Therefore, P—DPA aims to function as a 'generative' archive: a platform that emphasizes the possibilites of replicating and 'forking' of its items.

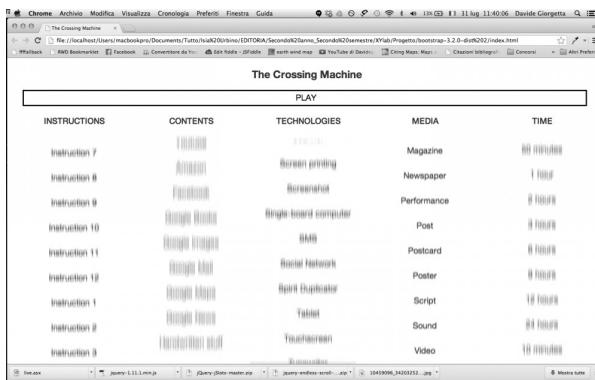


Fig. 10: *The Crossing Machine*'s interface.

A proof of concept of this attitude emerged during XYLab summer school¹¹. *The Crossing Machine* by Graziana Dammacco and Davide Giorgetta derived from the discussions about the notion of innovation through different media. This online slot machine provides instructions to create projects and artworks. The fields are the instructions themselves, contents' sources, technologies, media, and the amount of time to invest. During a performance, the group actually tested the machine by developing a series of projects that involved, among others, Yahoo Answers, Tumblr, and copy-machines. The project was inspired by P—DPA's index page, where the categories became a way to select of operative strategies.

11 XYLab took place between the 17th and the 31st of July 2014 in the baronial castle of Castrignano de' Greci. It included two different labs: X and Y, respectively about new publishing and videomhacking.

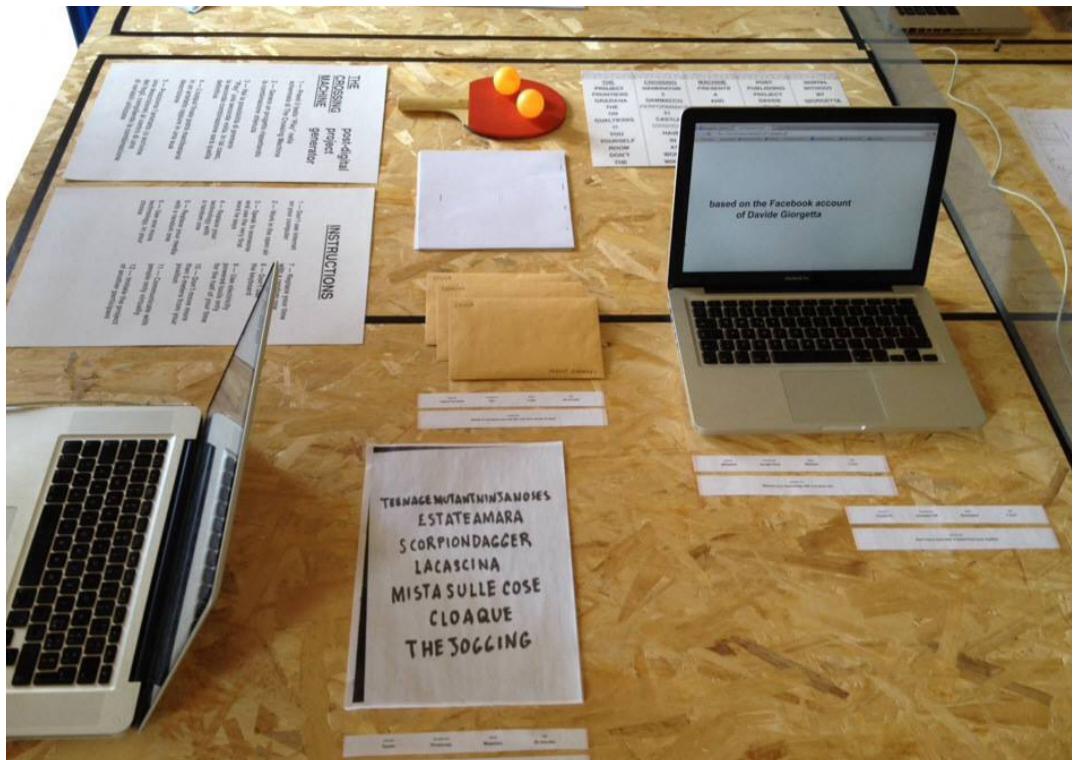


Fig. 11: Output derived from *The Crossing Machine*'s instructions.

Conclusions

In this dissertation I attempted to look at the current status of publishing and its relationships with digital technology through the lens of a series of experimentations organized according to a series of thematic strands of cases studies. In other words, I tried to define what publishing is on the basis of the discourse happening within its field, and then I re-articulated this definition by looking at projects that are located at the boundaries between publishing and other disciplines and practices. In order to categorize and relate these projects, I employed an online platform that represents both a practical case study in itself and a critical tool.

I juxtaposed the debate on the future of the book and the role of the publisher with a series of 'communication circuits', mechanistic models in which publishing is understood as a series of phases and processes. I looked at the way in which the history of books is interpreted, and how this influences the future of publishing, while considering how the present evolution of the book fosters a re-reading of its history. In doing so, I emphasized Bolter and Grusin's (1999) understanding of medium as incorporating the rhetoric around itself.

Furthermore, I dwelled on Bhaskar's publishing model and in particular on his emphasis on mediation, echoed in Malik's notion of "horizons of the publishable". The result was an understanding of publishing as a praxis consisting of a series of intertwined processes — production of content, production of artifacts, distribution, reception, and survival. Each of these is characterized and regulated by several mediation forces. The main advantage provided by this model is that is applicable to different typologies of content and media outputs.

I dealt with the vexed question of digital and digitality by providing an overview of the meanings of the term, from the strictly technical one — as encoding of discrete information, to its indirect and secondary effects — the cognitive and cultural changes due to the pervasive presence of networked electronic devices. Instead of approaching digitalization from a chronological perspective, I decided to focus on a series of significant episodes that allow to re-articulate the mutual influences of publication and digital tools, devices, and platforms.

An overview of influential perspectives allowed me to rethink the relationship among media, to recognize the performative nature of materiality as activated by the user, and to consider the determinant role of historical and cultural contexts in the use of technology. Within the communities of practices I discussed, these paradigms become the point of departure for a collaborative practice in which making corresponds to produce thought, design is understood as an intellectual method, and artifacts are seen as speculative props.

Looking at literary and artistic avant-garde, I outlined a set of criteria of a practice that can be considered genuinely experimental within the current pervasiveness of digital technology. 'Experimentality' is foremost a fluid attribute, since it is dependent on a mutating context. It

requires a practical approach that recursively interacts with critical thinking. If the dominant discourse around publishing perceives the application of digital technology as an absolute value and an unquestionable form of progress, the role of experimental publishing is then to challenge these assumptions through performative artifacts that highlight limitations and ambiguities. These artifacts take advantage of their communication potential in order to create a debate and attract attention towards overlooked issues.

The analysis of case studies in the third chapter is meant to identify the aspects that influence and extend the definition of publishing initially set out. First of all, the projects deny a clear distinction between a professional and amateur status in the field of publishing, since the same tools and platforms are used by publishers and professionals in the field as well as individual users.

The phase of content production highlights the profound entanglement of human activity and automation, even at the level of everyday tools such as word processors and layout softwares. Here, we find one of the dichotomies that is brought into question: the one that opposes human and machine. Considering writing a technology allows to include automated processes in its sphere. Digital writing is always regulated by a set of prostheses that transform and partly determine its outputs. Writing and disseminating text through digital devices shows the fluidity of another distinction: the one between reading and writing. Reading in a digital environment means to leave traces that become in turn new written textual forms.

The phase of production of artifacts depicts a context in which printed and electronic outputs coexist and complement each other. It is the very presence of a digital infrastructure that relocate the book as printed artifact and provides a novel meaning to the act of printing.

The distribution phase shows how performative strategies can be carried out in order to activate the user/reader. When the edition makes room to the version, distribution starts to involve autonomous circulation. The unity of the publication is thus disrupted. A publication is therefore not only characterized by its original text, but also by the constellation of autonomous fragments that relate to it. Two main aspects emerge: first, the distinction between the publisher and the public becomes fuzzy, since the latter is a decisive agent in the publishing process. Second, the traditional unity and seriality of the publication — derived from the standardization brought by the printing press — vacillates, leading to the development of strategies that embrace fragmentation and dissection.

In the fourth phase, reception is understood not only in terms of content but also in terms of ecosystem and apparatus. The projects discussed here show the possibility of an active challenge to policy making. Not only content can't be immanently received outside of a physical support, but it is also embedded into a series of legal rights and technical affordances.

Finally, the survival phase is focused on the politics of digitization, the labor involved in the scanning process, and the defense of the access to knowledge as an ideal traditionally epitomized by the public library. This phase shows how the publishing process shouldn't stop when the work is made public, but, it should create new contexts around the works in order to make them accessible. This is one of the goals of the Post-digital Publishing archive and its categorization system. Hopefully, it won't only represent a resource to study experimental works but a means to create new ones.

Many of the projects discussed were developed in educational contexts, mostly non-profit institutions and art and design schools between Europe and the United States. Among them, Central Saint Martins in London, the Piet Zwart Institute in Rotterdam, the Rhode Island School of Design in Providence, the Berlin University of the Arts, the Jan van Eyck Academie in Maastricht. Although my investigation has been geared toward these environments from the beginning, I would confirm that they are the most suitable places to encourage a publishing practice that is genuinely experimental. This is because they are *protected spaces*: contexts in which it is possible to address unsolved issues regarding the creation, distribution, and reception of knowledge without having to submit to the needs of the market and therefore without replicating its narrative.

According to Maxwell (2014), “Publishing education’s role [...] is the gathering and cultivation of those people who will take on this tradition, who will renew it and re-energize it.” He sees publishing as a “maker culture” in which “hands-on, studio-based practice blends with scholarly and critical approaches in a way that pays homage to the long craft tradition of printers and publishers.”

In order to nurture a welcoming environment for the communities of practice that would address these issues, art and design institutions need to avoid a commercial doctrine based on an ornamental understanding of digital technology, and its driving Hollywoodian rhetoric of engagement — a dominant tendency that I have linked to what I call ‘rich media’ (cfr. A.5). While rich media mostly emphasize the characteristics of the book as a technology to be used and consumed, poor media express and corroborate its potential of duplication and dissemination. Art and design institutions should focus on ‘poor media’ because they open up the possibilities for practitioners to gain effective skills related to the technologies employed, and therefore to have more consciousness of their inner dynamics. I’d like to conclude with a description of ‘poor media’ in the fashion of a manifesto, hoping that this will serve as an inspiration to develop the next communities of practice devoted to publishing.

Poor media foster duplication and boost circulation. They are lightweight. Poor media suggest an active use: frequently they can be converted, dissected, remixed, reorganized, updated. The modest simplicity of poor media doesn’t contradict the possibility to preserve them. The duplicating aura they carry amplifies their resilience: “lots of copies keep stuff safe,” archivists say. The poverty of poor media should be better called frugality, since it’s characterized by the conscious, serene renunciation of embellishments in favor of accessibility and spread. The spartan look of poor media might not be beautiful, but it’s undoubtedly charming.

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Conclusions

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Appendices



Fig. 1: P—DPA's abstract pamphlet.

A.1. Post-Digital Publishing Archive - Abstract

Pamphlet describing the Post-Digital Publishing Archive. Self-published in 2012.

A BROAD NOTION OF DIGITAL PUBLISHING

Much of the discussion around publishing is informed by a model of interpretation in which digital technology acts as the natural successor of printed matter. This model fosters a narrative of linear progress among media, according to which screen will eventually take over paper. As a consequence, the relationship between the two is read as a form of rivalry and thus produces endless, often unconstructive, lists of pros and cons, improvements or worsenings.

This perspective doesn't take into account the dynamics of mutual arrangement and negotiation among media, including the various 'backward' influences, so to say from screen back to paper. At the same time, it often tends not to dwell upon the specificities of the various typologies of artifacts that define the publishing field. Lastly, it is driven by an obsessive quest for future models, therefore the space where innovation is sought frequently corresponds to the narrow ecosystem of the newest device or platform, often transitional, that does not reflect the slower, less flashy but deeper mutations. In doing so, the universe of commonly used digital tools is often omitted from the discussion along with the analog, traditional, even retro technologies and the role they currently play. In order to accurately define the current condition of digital publishing and to deeply comprehend its broader scope, wondering what is the best device for e-reading or what is the fate of paperbacks could be reductive. The discourse on digital publishing should broaden its own horizons, asking whether the book itself can be considered a medium, investigating the existing relationships between the 'closed' form of the printed book and the ever-changing landscape of the internet. It should find out what print has to say to digital media besides skeuomorphism, without considering digital tools as means to merely consume content. It should question how knowledge and access are affected by mass digitization initiatives.

Actually, such questions aren't new, but they are rarely addressed by designers, developers and publishers through critical design or theoretical reflection. On the contrary, new technologies are often blindly embraced, as the capabilities of the devices are explored with the aim of developing commercially successful products. For instance, while countless design programs are devoted to the development of iPad apps, only a few involve design and artistic strategies to analyze and communicate the implications of iTunes and its distribution model.

Whether independently or within institutional contexts, some artists and designers (a good number, but still a few in comparison to the creative industry of publishing) have grown a practice-based, speculative and often critical attitude toward publishing, whether digital or not. It's neither a self-aware current nor an avant-garde, since those people work in distinct disciplinary areas and with different aims. Sometimes their practice only accidentally deals with publishing. But their work deserves attention because it could be able to anticipate, comment, and interpret the various issues that emerge at the intersection of publishing and digital technology. P-DPA aims to bring together those experiences.

Post-DIGITAL PUBLISHING

The term "post-digital" was coined by composer Kim Cascone in his essay "The Aesthetics of Failure: 'Post-digital' Tendencies in Contemporary Computer Music". According to Cascone (2000), "the revolutionary period of the digital information age has surely passed. The tendrils of digital technology have in some way touched everyone". At least in the first world, digital technology is an integral part of our everyday life and it is consequently taken for granted. In this sense the very attribute "digital" becomes meaningless, as almost every artifact we deal with is produced, distributed, mediated, or at least affected by digital means.

The notion of post-digital was borrowed by Alessandro Ludovico (2012) and Florian Cramer (2012) to be specifically applied to publishing. While this field hasn't yet profoundly under-

gone the radical mutations implied by digital technology, neo-analog means of production, such as the risograph or letterpress printing (and the style that characterizes them) are restored both by independents artists or designers and big publishers because “they compensate for deficiencies of digital files — deficiencies that are both aesthetic and social, since tangible media are means of face-to-face interpersonal exchange” (Cramer 2013). Frequently the resultant artifacts are deeply informed by digitality anyway, either as a source of content or as a reference model. When digital is the default, analog becomes a firm choice that, while is not necessarily a form of opposition, often derives from the awareness of the specificities of both possibilities.

The ‘post-digital mindset’ allows a more inclusive research framework of the publishing field, in which ebooks and book-apps aren’t the only object of study and where ‘old’ and ‘new’ media are not in a natural opposition. In the field of post-digital publishing, printed matter doesn’t belong to the past and digital tools are not inherently innovative. Artists and designers seamlessly shift between blogs and stapled zines. The digital environment is at the same time a source of inspiration, a repository of raw data to filter and organize, a channel for collaboration or dissemination, a space for exposure, a mix of communication modes to exploit, a set of tools to tweak or to autonomously build. It is not an easy task to identify and analyze the various aspects of such a broad context. Likewise, it takes a big effort to trace back the many ways in which digital technology addresses the specificities of traditional media and processes of publishing. Through a thematic approach to collection and archiving, P-DPA investigates experimental publishing in order to highlight aspects that specifically deal with digital technology and analog means, especially when they’re not blatantly apparent.

THE ARCHIVE

The aim of P—DPA is to systematically collect, organize, and keep trace of experiences in the fields of art and design that explore the relationships between publishing and digital technology. The archive acts as a space in which the collected projects are confronted and juxtaposed in order to highlight relevant paths, mutual themes, common perspectives, interrelations, but also oppositions and idiosyncrasies. Among the main questions posed by P—DPA, there are:

- How do artists and designers articulate the relationships between publishing and digital technology?
- In which ways the role of printed matter is redefined by digital technology and what kind of negotiation takes place between the two?
- In the post-digital era, where does publishing cease to be publishing? What boundaries need to be drawn in terms of media, ecosystems and practices?
- Are artists and designers able to identify issues that are not covered in the debate on the future of publishing, generally led by a straightforward, normative, and often commercially-driven notion of innovation? Which strategies are they introducing to address those issues?
- What kind of impact do experimental modes of production, intervention and dissemination of content have on publishing?
- What sort of meaning do traditional forms of printed publishing (such as the book or the magazine) assume when immersed in a context characterized by the pervasiveness of digital technology?

P—DPA is a curated archive but it’s open to submissions. It allows users with backgrounds in various disciplines to develop their own paths and interact in a specific way with its contents.

For instance, the archive could be useful to interface designers, literature historians, publishers, media theorists, and art critics. Furthermore, P-DPA houses critical reflection and commentary on the projects and their context. In this perspective, general overviews, critical analyses, articles, and interviews are hosted. While the main form of the archive is as online platform, works that have a physical existence are collected through a donation model and through fundings. Each item included in P—DPA is defined by a comprehensive set of informations that, if the creator agrees, is made available for download:

- General description of the (art)work
- Bibliographic data (e.g. ISBN, page number, size, publisher)
- Photo/video documentation (e.g. screenshots)
- Source code and digital versions (e.g. EPUB, PDF, EXE)
- Contextual data (e.g. artist's statement, press coverage, critical reviews)
- Technologies employed both in the production and the fruition of the work (e.g. InDesign or Scribus, Chrome or Firefox)
- License (e.g. creative commons, public domain)
- Aesthetic profile (e.g. movement, subject, community)
- Location (e.g. institution, collection, archive code)

The development of P-DPA, which is currently not publicly accessible, is documented on p-dpa.tumblr.com. The archive also acts as a thematic aggregator of materials found in various other archives and sources (such as the Library of the Printed Web or the Rhizome's ArtBase).

PRESERVATION, CONNECTIONS, AND NETWORKS

Within the instability and forgetfulness that are typical of the information age, P—DPA acts as a mean of preservation, not only storing the digital versions of the single work, but also investigating and philologically addressing the context, the ecosystems, and the cultural conditions in which those experiments exist. As net art, and contemporary art in general, has shown, preservation becomes a particularly urgent and tricky issue when it's aimed at natively digital works (e.g. softwares, websites, devices): the obsolescence of devices and platforms often tangles a genuine reproduction of the experience provided by the piece. Sometimes even the specific aspects addressed by the artwork (e.g. interface designs, a function of a software, production and conversion systems) quickly disappear from the records, complicating the interpretation of its scope.

Printed matter in turn results often volatile: for instance, as several collected items are books available only in print on demand, some of them even play with the impossibility of being purchased and thus becoming physical objects (e.g. selling the book for an extremely heavy price). And even when a certain amount of physical copies does exist, it could be difficult to interpret the book's context because of the absence, so to say, of author name, publication date, etc.

Finally, while the inclusion criteria are primarily thematic, the artist's or designer's reputation is not relevant. Therefore the archive comprehends several works by students, amateurs, and outsiders of the arts and design world. In doing so, P—DPA deals with the widespread empowerment provided by 'universal' access to digital tools.

A.1. Post-Digital Publishing Archive - Abstract

The thematic focus of P—DPA aims at revealing unnoticed relationships and connections between experiences belonging to different fields. Those relationships and connections represent the starting point for a conscious critique and a history of post-digital publishing employing artworks as landmarks and critical statements. The archive is also an opportunity to create a space for dialogue and exchange between artists and designers.

INCLUSION CRITERIA

The (art)works should *inherently address* or *anticipate* one or more aspects of publishing and one or more aspects of digital technology according to the following categories.

- Tools, modes of production, design (e.g. DTP, crowdsourcing, print on demand);
- Digital features (e.g. DRM, Internet, database);- Devices (e.g. computer, e-reader);
- Distribution, dissemination, appropriation, intervention (e.g. remix, plagiarism, download);
- Categorization, archivation, organization, structure (e.g. ISBN, tags, metadata, index);
- Bookness, bookform, book as object (e.g. skeuomorphism, binding, book as prop);
- Spaces and rituals related to books and publishing (e.g. online store, bookshop, library);
- Book typologies (encyclopedia, catalog, magazine).

Inherence: Not every printed book designed through digital tools or distributed via online platforms should be included in P-DPA. Here's where the 'inherence' of the single project becomes crucial: in order to be included in the archive, a work, through its own nature, should actively question, highlight, or reframe constitutive aspects of publishing in the post-digital age. Of course, this perspective on the works holds a level of ambiguity that is the result of the unique identity of the archive, which point of view is ultimately subjective. Inherence is a fluid criterion in a dialectic relationship with the digital environment. For instance, nowadays we consider copy-paste an inherently digital function, but it has not always been so.

Anticipation: An experimental project that predates the universal spread of digital technology shouldn't be excluded from the archive a priori. P-DPA applies a 'post-digital gaze' to experiences that, more or less consciously, anticipate modalities of the digital age. As an example, several "network-enabling" counterculture magazines could be considered as tangible expressions of what would later become known as the blogosphere. It is no coincidence that Steve Jobs described the Whole Earth Catalog as a sort of "Google in paperback form, 35 years before Google came along".

MAIN FIELDS OF INQUIRY

In order to guide the research of the projects to include in the archive, three main fields of inquiry are defined:

- Critical design: the space in which graphic and interaction design intersect and act as critical tools;
- The field of artists' books and bookworks;
- The area of new media art.

In those areas, several perspectives on publishing and experimental forms of dialogue between digital and analog are embedded into more extensive inquiries regarding the impact of technology on behavior, on the dissemination of knowledge and on the very definition of culture. The confrontation with these issues often requires the development of operative strategies that allow to test the limits and potential outcomes of technologies. In doing so, artists and designers outline parallel universes in which the extreme consequences of progress are highlighted and therefore opposed to the *status quo*.

Critical Design: According to Anthony Dunne (2005), the work of the designer can lead to “conceptual design proposals offering a critique of the present through the material embodiment of functions derived from alternative value systems”. The ‘critical designer’ develops artifacts, prototypes, or even concepts, the purpose of which is to raise questions on the implications of design itself on society. Those experimental designs are often able to provide direct and effective arguments against or in favor of a certain issue and exploit the possibilities of dissemination of new technologies.

Artists’ Books and Bookworks: Johanna Drucker (2004), book artist and historian of artists’ books, states that “artists’ books are almost always self-conscious about the structure and meaning of the book as a form”. In this sense artists’ books are useful analytical tools of the current condition of the book as a designed artifact, as a cultural object and as a commodity. Furthermore they provide alternative reading models, often anti-functional, as they are “books in which the book form, a coherent sequence of pages, determines conditions of reading that are intrinsic to the work” (Carrión 1980). The proposed models, more or less viable, often represent a radicalization of the technical aspects that affect the act of reading.

New Media Art: ‘New media art’ could be a misleading term because it seems to refer only to new media, and so to artworks that include digital technology to be developed or displayed. Frequently new media art takes into account digital tools as a cultural reference, therefore it’s not unusual to encounter projects employing traditional techniques and media such as painting or printed books. The notion of ‘new media’ itself is problematic and, in the context of this research, it will be interpreted both as digital technology and as emergent media opposed to settled ones.

RELATED ARCHIVES

- Library of the Printed Web
- Rhizome Artbase
- UbuWeb
- Monoskop Log
- AAAAARG.ORG
- Artists’ Books Online

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A.2. Critical Publishing — Design as a Tool to Investigate Current Publishing Ecosystems

Essay written in Italian in 2013 and published in DiiD - Disegno Industriale 57|14: Design Open Source

Desktop publishing systems, available on the market since the early 80s, contributed to a process of emancipation of the user, who has acquired a greater degree of autonomy in the implementation, and subsequently in the distribution, of his own communication artifacts. Several technological innovations, such as the advent of Web 2.0 and the widespread dissemination of smartphones, have subsequently consolidated this process. Each of them has radically redefined the relationship between producers and consumers, undermining as well the usual distinction between professional and amateur.

The considerable impact of these phenomena in the publishing industry produced a reshuffling of roles, a blur of the boundaries of the sector, and, not least, a significant level of disintermediation. Nowadays, it is possible to launch a book on the market in very little time and without the need of any kind of economic investment, thanks to print on demand platforms such as Blurb or Lulu. According to Mike Shatzkin (2013), a well-known connoisseur of the context, the near future of publishing is characterized by its mutation to a function, but some people go further: Clay Shirky (2012), who studies the economic and social effects of the internet, argues that publishing is “not a job anymore. That’s a button. There’s a button that says ‘publish,’ and when you press it, it’s done...”. The practice of publishing is here reduced to its minimum terms as it coincides with the mere act of making public, or available online, a given content.

In the field of publishing, design, as it is traditionally understood, was also swept by the wave: the total automation of the process, offered by the already mentioned platforms, includes the ability to generate the layout of the publication, drawing from a pool of more or less reduced options. While there is a general tendency towards simplification and standardization, it is useful to keep in mind that the complexity remains, since it is situated at the top level of the generating system, which is itself designed.

In this context, ebooks represent a great opportunity for the designer: with more than forty years of history behind them, the digital books only recently reached effective dissemination, through the general use of specific devices that allow their reading. Ebooks still offer considerable scope for intervention. It is possible in fact to experiment to help set new standards before emerging technologies and the related ecosystems will consolidate and give rise to fixed publishing forms. The current scenario is actually multifaceted and ambiguous, since it is characterized by the coexistence of very different types of digital books: a cauldron of devices, formats, technical features, and distribution platforms.

One of the paths that is beneficially explored is that of the book as an app, able to take advantage of the full potential of the tablet, whose symbolic model is the iPad, available on the market since 2010. The apps containing the books are not technically different from any other app on the device. An excellent case of this approach is the London-based Touch Press, whose mission is “to create new kinds of books that reinvent the reading experience by providing information enriched with multimedia content that can adapt dynamically to the interests and habits of the reader” (“About” 2013). For example, *The Sonnets* (2012) collects the sonnets of William Shakespeare, accompanied by notes and comments of prominent critics and scholars. Each sonnet is accompanied by a video clip in which it is performed by an actor or a celebrity. The app also lets you check the original version of the work in photographic form and share your favorite sonnets on social networks.

Unlike books as apps, which are often developed for a specific device, there are ebooks in EPUB format, an open standard whose strength lies in the compatibility with a wide range of devices: from the smartphone to the desktop computer, including various tablets and e-readers. This prerogative often represents a limit to the designer as articulated layout and multimedia features are not interpreted in a consistent manner by the various devices and sometimes are not even supported. Despite numerous efforts are underway to make the format more versatile, it can be said that the EPUB is, at the time of writing, paradoxically more restrictive than the printed book.

Between these two opposites I described there are several intermediate possibilities that require anyway an upgrading of the skill of the designer, who needs to relate to disciplines also very far apart, as screenplay or motion design. The possibilities discussed above concern the redefinition of the reading experience and the development of design models that can meet the new standards that characterize the digital book. These can be combined with a complementary perspective that aims to explore the specificities, probing the limits, and highlight the problems of emerging publishing ecosystems and their related devices, through the design of artifacts.

For instance, Megan Hoogenboom engages in a transposition as faithful as possible of *Boem Paukeslag*, a concrete poem written in the 20s by Paul van Ostaijen, in EPUB format. The value of the project lies in the considerations arising from the implementation process: to get the particular configurations of the original, several hacks and workarounds, generally not permitted by the e-reader, were necessary. In fact, the ebook is displayed correctly only by the device on which it was developed. Therefore the ebook goes against the very nature of the format, showing in a paradoxical way, the state of the art of digital books. The book was made in 2010 as part of a course about designing ebooks held by Florian Cramer at the Piet Zwart Institute in Rotterdam.

As shown by Chris Hamamoto, it is possible to investigate digital publishing through analog media: three paper booklets in fact compose the *Skeuomorphic Library*, created in 2013 during the 'Book Lab' course held by Benjamin Shaykin at the Rhode Island School of Design. Each booklet includes frames of page-flip animations recorded from iBooks, Google's Play Books, and Kindle. This unique archive of interface combines digital media with their paper counterparts: in this way, the specificities of the reading experience produced by different software emerge, together with aspects of ergonomics and, not least, issues concerning the ownership of these virtual environments, whose visual attributes are often protected by patents.

Made in 48 hours by Les Sugus, a group of students from ECAL in Lausanne, the *DRM Chair* (2013) is a wooden chair which, thanks to the sensors and actuators which it is equipped with, is able to self-destruct after a certain number of uses, eight in this case. The project is a response to a specific mode of administration of DRM (Digital Rights Management), employed by various publishing houses and distribution platforms: it is meant to ensure that an ebook becomes unusable after a certain number of transfers between devices. By applying such modality to the physical world, its unreasonableness and the disadvantages it brings to the user become more evident.

The aforementioned projects, escaping the logic of direct innovation, are situated in a speculative space and investigate the current technology landscape, with its peculiarities and implications. These artifacts have a strong communicative value since they concretize aspects of digital publishing that are rarely addressed by the designer since they are deemed inconspicuous or secondary. Acting as "conceptual design proposals offering a critique of the present through the material embodiment of functions derived from alternative value systems" (Dunne 2005, XVII), they can be related to the experiences that derive from the so-called 'Critical design', framed by Anthony Dunne and Fiona Raby.

The operational strategies put in place are very different and may even exclude the direct use of

new technologies. Frequently, these strategies are borrowed from the world of art, with which it is in a process of mutual trespassing. The resultant hybridizations reflect in an exemplary way the fluidity that defines the contemporary practice of the designer, who moves among diverse reference models and techniques, in order to produce critical thinking through the design of artifacts. Often this approach is cultivated in laboratories and universities: institutional contexts, providing a space protected by productivistic dynamics, allow to understand design as a tool of analysis and articulation of complexity.

In the past, designers have frequently taken the role of mediators between the technical universe and users, in order to make intelligible the functionalities of emerging technologies. The idea that “good design makes a product understandable”, one of the ten principles expressed by Dieter Rams (2013) in the late ‘70s, refers to such notions as affordance and usability. In the age of the emancipated user who does not need mediators, the outlined projects redefine the very idea of comprehensibility of the technological artifact, promoting a deeper understanding of the technical aspects and their economic and social implications.

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A.3. Print on Demand – The Radical Potential of Networked Standardization

Essay published in 2015 in Code—X – Paper, Ink, Pixel and Screen edited by Danny Aldred and Emmanuelle Waeckerlé.

I began to be interested in Print on demand (POD) while I was doing an internship at the Institute of Network Cultures in Amsterdam. The INC, founded in 2004 and directed by media theorist Geert Lovink, is a research centre that “analyzes and shapes the terrain of network cultures through events, publications, and online dialogue”. Generally, INC’s publications can be read online, downloaded, and even ordered as physical books for free. As a consequence, it sometimes happens that these free books are then sold for a price elsewhere. However, people at the INC do not complain. What they care about is the dissemination and circulation of ideas, so they are enthralled by the unexpected ways in which content is redistributed and reframed.

This was the attitude that guided my research on POD. I discovered that Print on Demand is a system that allows even just a single copy of a book to be printed and made commercially available without any prior investment. This sounded revolutionary. As an intern, one of my tasks was to explore different POD platforms such as Lulu, surely one of the most well-known and probably the most appropriate for text-driven research publications. I also had the chance to try out the Espresso Book Machine, a complex apparatus with transparent frames through which one can see the process of getting a book printed and bound in about 15 minutes.

At first, I was disappointed by the quality of POD services. For instance, I found Lulu's user interface – which was recently redesigned – cumbersome, both for the publisher and the purchaser. While the ultra-reflective covers of their paperbacks are quite tacky, the promised “perfect binding” breaks after the books are opened a few times. Furthermore, as a graphic designer I felt that POD was too limiting: the possible choice often consists of a couple of different papers and a few standard formats.

But after some time, I started appreciating such humble but distinctive physicality: I think I can easily spot books printed with Lulu. To me, their peculiar identity became appealing as much as cheap xeroxed zines. It's no coincidence that Xerox played a crucial role in the development of POD systems, both in technical and cultural terms. While it combined the functional components that make POD possible, it also supported experimental projects that employed it. In 2007, the Italian branch of the company promoted the realization of *Tristano*, an early example of a generative novel by Nanni Balestrini, first published in 1966 but fully realized only four decades after, when it was finally possible to print and bind unique permutations of the text. In Umberto Eco's words:

[...] nowadays, not only with the computer able to rapidly combine in the most dizzying ways, but with digital printing and Print on demand, the reader can have “in the flesh” a copy of the story different from all the others (which represents at the same time the triumph and death of the numbered edition, as each copy should be the number I), or have XXXX copies to compare them (given enough time). (Balestrini 2007, X)

It's fascinating to think of POD's materiality as a compromise among the technical infrastructure, users' needs, and the economic constraints of both the publishing industry and e-commerce. This is well exemplified by *Post-Fordism and its Discontents*, a book that exists in four versions and which design – by Nina Støttrup Larsen and Žiga Testen – epitomizes its production and distribution processes. Its cover becomes a space to acknowledge the different editions, as well as their prices and print runs.

In this sense, POD books represent a genuine hybrid of digital and analog processes: under the guise of the “traditional” book form, there is a complex ecosystem made of file formats, metadata, retail platforms, multiple connections to online stores and, sometimes, even YouTube book trailers, authors' blogs, etc. Sent through the regular postal system, the physical book is the tip of the iceberg of an infrastructure that takes advantage of digital printing, desktop publishing, PDF format, and Web 2.0. Therefore, POD is not a new technology in itself, but a fruitful combination of existing ones.

In 2011, researcher Giulia Ciliberto and I developed *Blank on Demand*, a project that adopted the physical book as a unit of measure of a whole POD production and distribution process. It consists of two volumes printed with Lulu, whose formats correspond respectively to the maximum and minimum dimensions currently available. Similarly, page amount and price are set according to the limit values allowed by the platform. The two books are completely blank, except for the presence of the ISBN code. Deprived of any content, they reflect the influence of the current technological context on their materiality. We were particularly fascinated by the idea of paper sheets going through all the complex print machinery without any purpose.

This isn't the only project aimed at testing POD platforms and experimenting with them. *Dear Lulu*, a book meant to calibrate various graphic parameters such as patterns, colors, and typography, is the result of a workshop run by James Goggin in 2008 at the University of Applied Sciences in Darmstadt. The procedure was afterwards extended to other platforms, such as Blurb and MagCloud. *Variable Format* is a manifold project conceived in 2012 by Lynn Harris, published by AND, and designed by Åbäke with Pierre Pautler. Materials collected from the now closed library of the Byam Shaw School of Art form the content of a publication that is spread through twelve POD platforms. Instead of being resized to fit the various formats, a single layout is cut, so each printed artifact acts as a unique "framing" of the same source. Finally, *The Black Book* by Jean Keller: made in 2013, it takes the value of books in a literal sense, drawing from the premise that printer ink is one of the most expensive substances in the world.

As these bookworks represent, to use Johanna Drucker's (2004, 161) words, a "self-conscious record of [their] own production", it is fair to ask in which ways POD informs the field of artists' books and connects to its legacy. Comprising very diverse artifacts, the context of artists' books is an intricate one: from inconspicuous conceptual paperbacks to crafty, sculptural book-objects. Probably, it is this latter embodiment that leads to a prejudice towards POD artists' books, rarely found at fairs or exhibitions. An anecdotal proof of this preconception is a recent call to which the eligibles are "any artist bookworks other than SPOD (Self Published On Demand such as Lulu, Blurb and so forth)" ("Artists' Book Cornucopia VI" 2014).

Instead of failing to fit some dubious criteria, I argue that POD *reinforces* the inheritance of the artist's book as a democratic multiple. From a material perspective, I think of some of Ed Ruscha's bookworks, playing with the evenness and anonymity of mass production in order to provoke a mild shock, "a kind of a huh?" in his own words (Ruscha, 1973). Such evenness is a defining feature of POD systems: in order to produce unique copies, paradoxically, they enforce the limitations of mass production by applying stricter standards. From an ideological perspective as well, POD seems to extend the democratic impulse professed by several artists working with books. In 1976, Sol LeWitt (1976) published the following text on *Art-Rite*:

Artists' books are, like any other medium, a means of conveying art ideas from the artist to the viewer/reader. Unlike most other media they are available to all at a low cost. They do not need a special place to be seen. They are not valuable except for the ideas they contain. They contain the material in a sequence which is determined by the artist. (The reader/viewer can read the material in any order but the artist presents it as s/he thinks it should be). Art shows come and go but books stay around for years. They are works themselves, not reproductions of works. Books are the best medium for many artists working today. The material seen on the walls of galleries in many cases cannot be easily read/seen on walls but can be more easily read at home under less intimidating conditions. It is the desire of artists that their ideas be understood by as many people as possible. Books make it easier to accomplish this.

This democratic impulse was quickly subsumed and partly extinguished by the dynamics of the art system: let's consider for instance the price of old *Art-Rite* issues, originally set to \$1, which is currently around 100\$ on eBay. In contrast, POD seems to foster a more profound proclivity to "convey art ideas [...] to all at a low cost". When using POD, several artists enable the online preview of the whole book or make the PDF of the publication available for free, which, as Alessandro Ludovico (2014) points out, can be seen as a sort of sub-medium, as it evolves from a production standard to a standalone one.

A.3. Print on Demand – The Radical Potential of Networked Standardization

In turn, the physical book seems to represent almost an incentive to distribute ideas in a digital environment, while its photographic documentation is a means to establish the publishing act. In fact, as poet Kenneth Goldsmith (2013) notices, experimental POD publications are sold — if ever sold — in extremely small amounts. Furthermore, their price is often set to the minimum, which means that the artist doesn't get any money — an aspect that raises legitimate concerns about the sustainability of such practice.

Artists who employ POD are often very conscious of its effects and implications. The Artists' Books Cooperative (ABC), founded in 2009 and consisting of several members located all over the world, declares:

Print-on-demand liberates artists from the oppressively expensive and laborious demands of traditional photobook publishing. Print-on-demand is fast, cheap, and light. It exists outside the power structures of publishers and distributors. [...] We're interested in raw ideas and there is no better transporter for a great idea than a book. A single book if needs be. And with the internet, the ideas in that single book can go viral and reach millions in a split second (ABC, 2014).

Borrowing from German philosopher Ernst Cassirer, media theorist Florian Cramer (2013) suggests to consider the book as a “symbolic form”, since it is able to transcend diverse media and supports. ABC's work echoes, and even extends, such perspective:

We're all involved in publishing *the idea* of a book online. That is to say, each of our artists presents their book in some form of digital format that exists online as well as in physical form. That doesn't mean it has to be an e-book. It could be the book presented as a video trailer on Vimeo, as a single line of text, a performance documented, an essay, a series of stills, or as a downloadable pdf file. The book exists in physical form and in conceptual form. It travels further and quicker as an idea than as an object. (ABC 2014)

ABC member Paul Soulellis is the curator of the *Library of the Printed Web*, initiated in 2013. It includes publications in which content from the Web is transposed to print in ways that are often surprising (the library contains postcards, newspapers, zines). Many of these are POD books. In my opinion, this “archive devoted to archives” (Soulellis, 2013) highlights the radical potential of POD: with a few clicks and a fair amount of money, a good part of Soulellis' collection can be physically reconstituted somewhere else, while its digital incarnation circulates online as multiformal embodiments of art ideas.

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A.4. What We Talk About When We Talk About Publishing



A.4. What We Talk About When We Talk About Publishing

Essay published in 2015 in Progetto Grafico #28 - Pubblicare edited by Maria Rosaria Digregorio, Silvio Lorusso, Silvia Sfigliotti, and Stefano Vittori.

Until a few decades ago, common sense instinctively associated publishing to the work of professionals such as writers, journalists, editors, and publishers, but also printers and booksellers. That link was confirmed by the efforts of those who were not professionals: publishing one's own work brought — and still brings — a certain prestige, sometimes able to free us from the status of amateur. Once printed, even the most substandard book expresses some authority. Consider in this regard the bias inherent in the expression *vanity press*: authors who at their own expense pay for a manuscript to be published are supposedly guided by the need to feed their own reputation rather than by a desire to spread their work. The term *publish* was therefore closely related to the publishing industry and, as we have deduced indirectly, inextricably linked to production through print. One thing is certain: only a small minority of the population published. And, if we just consider books that are printed, things are still the same¹.

1 According to Istat (the Italian national statistical institute), in the year 2013 about 40,000 first works were published in Italy, about one per every fifteen hundred inhabitants.

However, since the eighties, with the spread of personal computers and, later, with the increasing use of the Internet, the word *publish* has taken on a broader scope. If desktop publishing has made typography a common activity (who's never heard of Times New Roman?), the Web has produced a new environment in which to publish, potentially accessible to all. The meanings of the term have therefore multiplied and its use in everyday language has presumably increased. With its many terminological variants — suggesting the rhetorical (*share*), the technical (*post*), or the corporate (*tweet*) — publishing has become part of everyday life online. A revealing fact is that on Google, the most common search since 2004 associated with the term *publish* relates to Facebook, followed by the more traditional *publishing a book*².

These developments lead us to reflect on the relationship between the publishing industry as a professional sector and publication as a daily practice, and therefore at times invisible, by users of the Web. Does it makes sense to draw a clear line between these two areas? Can we identify or build a framework that takes into account their mutual influences through a holistic conception of publishing? Where do we start? First let's explore the definitions provided by dictionaries. In its most general sense 'publishing' is defined as making public, i.e. known to all, making known publicly, disclosing. A more specific semantic sphere refers to publishing as a profession, with a frequent emphasis on the commercial aspects and the use of printing. This is the case, for example, of the *New Oxford American Dictionary*, which indicates "the occupation or activity of preparing and issuing books, journals, and other material for sale". *The Dictionary of Publishing and Printing* updates the definition to include electronic formats. As writer and British publisher Michael Bhaskar (1993) notes, such definitions make publishing an activity dissociated from that of the author, and somehow subsequent to it. While not exhaustive, this brief survey allows us to identify the poles of publishing along the line of what might be called interference or mediation. While the first meaning, similar to the simple *declare*, has a minimum of mediation, the second indicates a practice implicitly consisting of various stages and actors. Finally, among the less common meanings, there is one that is particularly interesting because it highlights the clandestine aspect of the one who publishes as "one who utters, passes or puts into circulation a counterfeit paper" (Webster's).

Having measured the extent of the concept through some of its definitions, we will now explore the publishing models proposed by various scholars. Among them is the American historian Robert Darnton (1982), who develops what he calls the communications circuit: "a general model for analyzing the way books come into being and spread through society" able to channelize the various ongoing studies on the history of the book, or, rather, "the social and cultural history of communication by print". This model, built on the basis of the paper book ("as a force in history"), focuses on the actors of the editorial process and the communication between them: author, publisher, printers, suppliers, shippers, booksellers, bookbinders and finally readers, who refer to the former, influencing future work or being authors themselves. The circuit undergoes the changing intellectual influence of its times, advertising pressures, the economic and social situation, and any political and legal sanctions. Although not present in the diagram, Darnton indicates a further, crucial influence to consider: that of other media. Faced with the communication circuit, a question arises: where do we place the act of publishing? Does it cover the entire model or only in part? Or is it a not clearly identifiable threshold between the various phases?

2 <https://www.google.com/trends/explore#q=pubblicare>.

A later variant of the model, advocated by Darnton himself has been proposed by scholars Adams and Barker (1993). In this case the protagonist is no longer the book, but the more inclusive “bibliographical document”, “something printed or written in multiple copies that its agent, be it author, stationer, printer or publisher, or any combination of these, produces for public consumption. [...] The controlling factor is that the document was designed to perform a specific function, either private or public”. Rather than actors, the new circuit consists of five recurring phases: publishing, manufacturing, distribution, reception and survival, also immersed in the “entire socio-economic conjuncture. The main innovation of the model lies in the survival phase: a cumulative process through which a bibliographical document is initially distributed and used by the public, then lives a phase of immobility that, if overcome, can lead to its rediscovery or republishing in a new edition. This phase often follows secondary or even devious paths. Adams and Barker provide a precise definition of publication, understood as “the point of departure, the initial decision to multiply a text or image for distribution”, specifying that “The decision to publish, not the creation of a text, is, then, the first step in the creation of a book”. Publication thus becomes a specific moment, which may precede or follow the production of the text.

Researcher Rachel Malik (2008), in opposition to both Darnton and Adams and Barker says that “Publishing precedes writing and governs the possibilities of reading”, and continues arguing that “Publishing is a set of historical processes and practices — composition, editing, design and illustration, production, marketing and promotion, and distribution — and a set of relations with various other institutions — commercial, legal, educational, political, cultural, and, perhaps, above all, other media.” To Malik, more relevant than publishing is *publishable*, understood as a series of *horizons* that surround a broad area made up of cultural and media relations.

Recently Bhaskar (2013) laid the foundations for an ambitious publishing theory capable of including both what preceded the advent of interconnected digital technologies and what is happening therein. Here is a brief overview of the key concepts of the theory. *Content*, “an embodied form of knowledge”, is a prerequisite of any publishing venture. It is indeed contents but above all it is presented, and shaped, by *frames*; frames are, for example, the pocket-sized screens and the code that regulates electronic texts. The person who publishes, conventionally the publisher, thus becomes a frame builder. The production of content and its frames is driven by *models*, which can be seen as “an assemblage of motivations and expectations”. Everything is regulated by two processes: the first, known as *filtering*, includes both the conscious choices made by the one who publishes and also the many dynamics (economic, social or cultural) able to bring out or overshadow a given content. Finally, the *amplification* process allows you to concretely specify the act of publishing: while the idea of “making public” is ambiguous — is it enough to print a manuscript or upload it online for it to be considered *published*? — amplification requires “a movement from lesser to greater exposure”. In short, it can be said that “filtering and amplification occur *through* frames constructed *according to* models”. Between the lines lies a concept that emerged earlier and that ties together all the others. And this is the mediation process that, to varying degrees, structures the publication, facilitating it or obstructing it. Not surprisingly, for Bhaskar “a theory of publishing is a theory of mediation, of how and why cultural goods are mediated”.

Paradoxically, the rhetoric that has characterized online publication has relied precisely on the absence of mediation. As early as 1995, John Markoff stated in the New York Times that “any-

one with a modem is potentially a global pamphleteer". However, the impact of the Web has not only concerned the space of publishing but also the availability of tools and infrastructure: the increase in a lot of "independent" publishing is often connected to so-called disintermediation, a phenomenon in which the traditional functions performed by the publisher, including that of *gatekeeper* are cancelled or taken over by the author. According to Mike Shatzkin (2013) we are seeing a process of "atomization" after which the publishing industry will pass from being an industry to being a mere function. Clay Shirky (2012) makes things even worse, saying about publishing: "That's not a *job* anymore. That's a *button*. There's a button that says "publish," and when you press it, it's done". These prospects, often of the techno-positivist sort, are contained in the slogan "everyone is a publisher".

The greatest risk associated with this truism, which retrieves the most general acceptance of publishing as pure expression, is that of underestimating the role played by the platforms that host and distribute content online. The dynamics of mediation are hidden by immediacy — understood here as timeliness — of the publishing process. In fact, there is an increasing number of interfaces in which it is difficult to distinguish the production phase of the content from the time when it becomes public. The idea of an online publication free of interference is naive: think of the national legislation to which servers are subjected because of their physical location, or the way social network and search engine algorithms favor some contents to the detriment of others. A broad and effective view of publishing must take account of these numerous layers of mediation. Second, as stated by James Bridle (2011), the motto "everyone is a publisher" makes a clean sweep of a series of skills acquired and refined over the centuries by editors, replacing them with a simplistic model in which to publish a given content is equivalent to making it available on the Web.

The effects of mediation are present at all levels of publishing, so it is useful to consider it as a set of processes and relationships, as suggested by both Bhaskar and Malik, rather than as a specific moment. How can we not acknowledge, for example in the 140-character limit of Twitter, that the horizons of the publishable affect writing and reading? It is also worth pointing out the current emphasis of amplification in daily online publication: the constant exaltation of quantitative data, which particularly characterize the dominant social media, equips users with a unique and unquestionable unit of measure of a post's value. Amplification becomes doctrine.

Finally, you can design the publication process in a more inclusive way if you contemplate the survival phase: today contents circulate and fragment through an ever increasing number of frames, both analogue and digital. From low cost editions to RSS feeds, to book trailers and reviews on Amazon, what is published moves along an ever-changing system of relationships. According to Dutch designer Daniel Van der Velden (2011), this context makes editorial design become "the process of coordination required to fine-tune all these online and offline efforts". It is therefore crucial not just to limit oneself to the design of individual publications as such, but to consider the constellation of formats, media and platforms available, the mutual influences of other media and the active role of users, who, although not all publishers, may certainly be more than mere carriers.

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A.5. Digital Publishing – In Defense of Poor Media

Essay published in Printed Web 3, edited by Paul Soulellis, 2015.

This text pays homage to “In Defense of the Poor Image”, an essay in which German artist and writer Hito Steyerl (2009) speaks of the kind of “charge” that the poor image — an image that “has been uploaded, downloaded, shared, reformatted, and reedited” — acquires while circulating through networks. I argue that, in the field of digital publishing, poor media are able to “transform quality into accessibility,” like the poor image does. Poor media substantiate the book’s potential for duplication and dissemination. Conversely, rich media are the product of a commercial doctrine based on an ornamental understanding of digital technology, a Hollywoodian rhetoric of engagement, and a reactionary conception of the publishing process.

PART I: RICH MEDIA

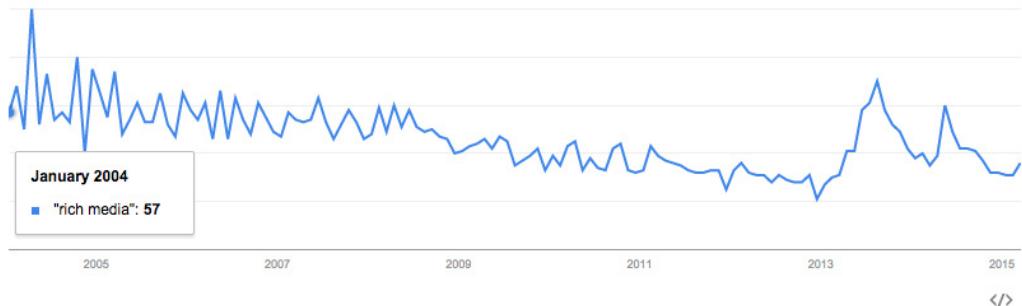


Fig. 1: Interest over time on Google Trends for the term “rich media”.

In order to elaborate upon the concept of poor media, I'll explore the notion of rich media in the first place. In the context of its ad system, Google provides the following definition: “A Rich Media ad contains images or video and involves some kind of user interaction. [...] While text ads sell with words, and display ads sell with pictures, Rich Media ads offer more ways to involve an audience with an ad. The ad can expand, float, peel down, etc.” (“What Is Rich Media?” 2013). According to Wikipedia, “the term ‘rich media’ is synonymous for interactive multimedia” (“Multimedia” 2015).



Fig. 2: Rich media banner ads archived by the Banner Ad Museum, 2001.

Rich media emerged in a period when the bandwidth was growing and animated gifs were giving way to interactive Flash banners. It's 2001 and “Rich Media is the buzzword of the moment, but many are still in the dark about what ‘Rich Media’ really is. [...] Rich Media refers to the utilization of various technologies to enhance a recipient's experience. Rich Media can be interactive, and can be tracked to determine among recipients the open, view and response rates to a campaign” (“An Overview of Rich Media” 2001).

While the expression ‘rich media’ seems to have originated in the field of advertisement and its usage over time looks fluctuating, I believe that it accurately reflects the combination of presumptions and expectations revolving around what was called electronic, and later digital, publishing. As I’ll discuss, its marketing connotation reverberates in publishing too.

As with the *Daily Prophet* browsed by Harry Potter, rich media are meant to bring to life an otherwise inert artifact by adding a ‘magical’ element to the printed page. Computer pioneer Alan Kay (2001) speaks about magic as well: according to him, metaphors employed in user interfaces shouldn’t literally follow the physical world but express what it can’t be done there: “if [the screen] is to be like magical paper, then it is the magical part that is all important.”



Fig. 3: An ebook made with iBooks Author.

In January 2012, Apple released iBooks Author, a software to create enhanced ebooks that can include “galleries, video, interactive diagrams, 3D objects, mathematical expressions and more”. These rich media “bring content to life in ways the printed page never could” (“iBooks Author” 2012). iBooks Author doesn’t require any coding or deep technical skill. In fact, users can choose among several ready-made templates and customize them according to their needs using a WYSIWYG interface. Finally, the books can be seamlessly made available into the Apple marketplace.

The kind of slick enhanced books produced, distributed, and sold within the Apple ecosystem is what publishers, designers, and readers often think of when asked about the ‘future of the book.’ Despite the fact that enhanced books represent a small, barely lucrative slice of the overall production of ebooks (*The Huffington Post* 2012), practitioners of the field and the general public are still dazzled by books that change over time, books that speak back, books that self-destruct, books that react to the mood of the reader, books that connect to the physical location in which they are read, etc. Apparently, this is the avant-garde. The reality is that, the wheel is reinvented over and over.

In order to provide just a glimpse of the complex history of rich media and to extend the definition sketched above, I'll briefly discuss some technologies, ideas, and particular moments that contributed to the development of such notion in the field of digital publishing.

E-LITERATURE AND HYPertext FICTION

The working definition of electronic literature (e-literature or e-lit) provided by the Electronic Literature Organization (ELO) encompasses “works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer” (“What Is E-Lit?”). Several genres can be seen as being part of it; one of these is hypertext fiction.

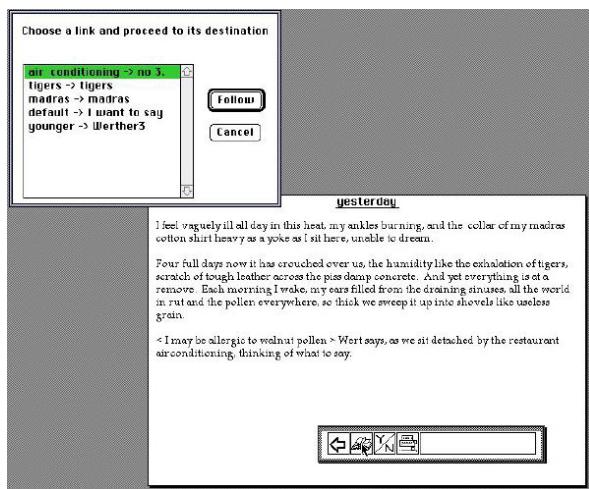


Fig. 4: A screenshot of *afternoon, a story* by Michael Joyce.

Early interactive novels such as *afternoon, a story* by Michael Joyce (1990) and *Victory Garden* by Stuart Moulthrop (1992) are now considered milestones. These publications provided an impressive amount of narrative paths chosen by the user/reader. Both novels were realized using Storyspace, a software created by Jay David Bolter and Michael Joyce himself (another successful software to produce hypertext narratives was Apple's HyperCard).

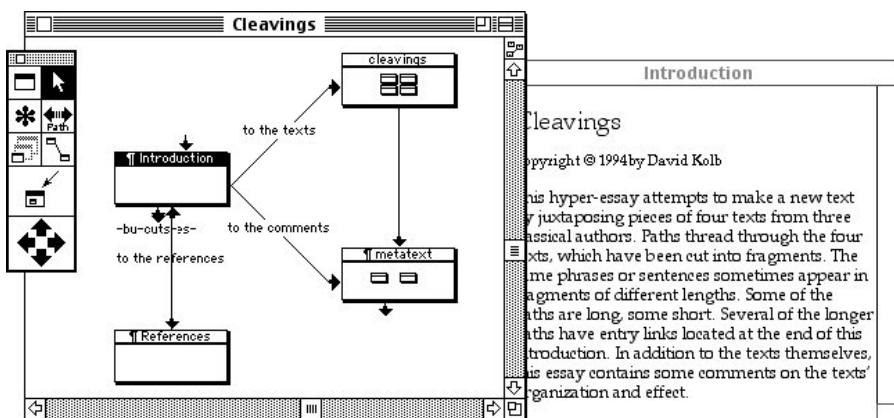


Fig. 5: A screenshot of Storyspace's interface.

Such pioneering works, together with the development of hypertext theory, let e-writers assume that the interactivity and non-linear possibilities offered by the hyperlink were to revolutionize literature (cfr. Hayles 2002, 27). In *the New York Times Book Review*, Robert Coover (1992) decreed the end of books as static, monolithic, and unidirectional experiences. On the contrary, “[w]ith its webs of linked lexias, its networks of alternate routes [...] hypertext presents a radically divergent technology, interactive and polyvocal, favoring a plurality of discourses over definitive utterance and freeing the reader from domination by the author.”

VOYAGER COMPANY'S EXPANDED BOOKS

In an episode of the *Computer Chronicles* from 1993, Bob Stein presents some of the products of his Voyager Company, founded in 1985. Among them, The Beatles' *A Hard Day's Night* is an example of multimedia CD-ROM where the traditional categories of publishing begin to merge.

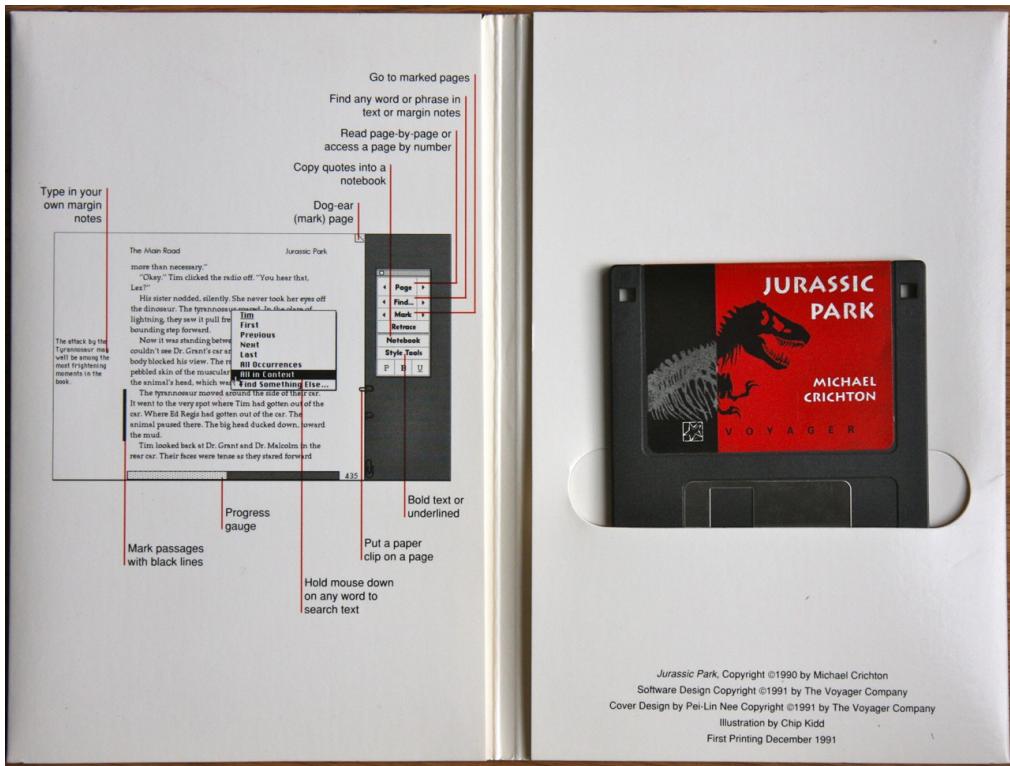


Fig. 6: *Jurassic Park* Expanded Book, Voyager Company, 1991.

Stein shows the Expanded Books as well: a series of ebooks on floppy disks for the Macintosh that “look like a book and to act like a book” (“Electronic Publishing” 1993). *The Picture of Dorian Gray*, one of them, includes functionalities such as text search, annotations, passages’ highlight. The anchorman acknowledges that it is more of a research tool than a book, but he doesn’t seem totally satisfied and asks for graphics. Stein reassures him by telling that the toolkit they sell allows to create ebooks including movies, audios, pictures, etc. As this excerpt shows, early ebooks suffered from an inferiority complex. Multimedia was the cure: video and audio made ebooks unique and more captivating than printed matter.

THE iPAD



Fig. 7: Steve Jobs describes the key functionalities of the iPad, 2010.

In 2010, the first iPad was released. During its first public presentation, Steve Jobs described the iPad's core functions, the things that this new device was better at than the mobile and the laptop. These were: browsing the Web, reading emails, watching photos and videos, listening to music, playing games, and, finally, reading ebooks. Thanks to its handiness and its multi-touch, high-quality display, the iPad soon became the natural environment of rich media applications merging the key operations listed above.

DIGITAL PUBLISHING SUITE

A screenshot of a webpage for Adobe DPS. The top navigation bar says 'DIGITAL PUBLISHING SUITE'. Below it, there is a section titled 'Add interactivity.' with a sub-section 'Immerse your readers in content that combines the visual appeal of print with the interactivity of video, audio, slide shows, and more. Speed time to market by previewing and iterating content across a range of devices.' A 'Learn more >' button is at the bottom of this section.

Fig. 8. Screenshot from webpage presenting Adobe DPS.

In the current context of digital publishing, iBooks Author is not the only proprietary software available to produce rich media publications. Mostly employed to create enhanced magazines, the Adobe Digital Publishing Suite (DPS) was recently named “the leading digital publishing solution” (“Adobe Digital Publishing Suite” 2012). The DPS is meant to “create, publish, and optimize content-centric mobile apps”, another name for enhanced publications. DPS’ apps are supposed to be immersive and engaging, thanks to “sophisticated text treatments with video, audio, animation, and other highly interactive elements.” In order not to ‘shock’ its users, Adobe designed the DPS as an appendix of InDesign; maintaining its print-oriented workflow basically intact.

SOCIAL READING

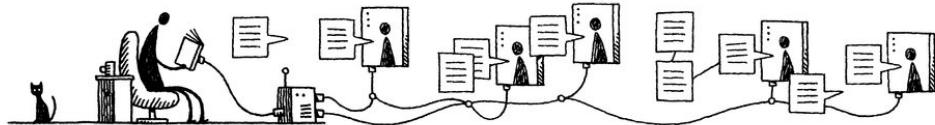


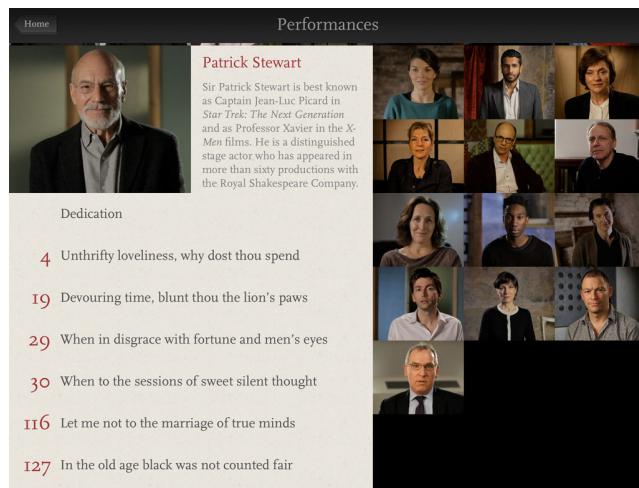
Fig. 9: Tom Gauld for the New York Times, 2011.

The notion of ‘social reading’ emerged around mid-2011 (“Social Reading” 2015) when platforms like Goodreads – later acquired by Amazon – were quickly growing and e-reading devices like the Kindle began to let users share their reading activity on social media. According to the definition provided by OpenBookmarks, social reading is “everything that surrounds the experience of reading electronic books” (“What Is Social Reading?” 2011), like the following example:

You’re reading an ebook. You find a bit you like, and you select the text and email it to a friend.

Why do I consider social reading as a facet of rich media? Because some of the functionalities that go under the social reading umbrella – like the sharing of highlights – are often embedded into enhanced books.

ALL TOGETHER Now

Fig. 10: A screenshot from *Shakespeare's Sonnets* by Touch Press.

Shakespeare's Sonnets, an ebook as app for the iPad made by London-based publisher Touch Press, is a much recognized example in the field of enhanced publications. The *Sonnets* embody several of the rich media characteristics described above. For instance, each sonnet is performed by a well-known actor. The performances are incorporated in the book as entertaining

videos. The sonnets are accompanied by two different sets of annotations. It is also possible to browse the 1609 Quarto edition of the book. As well as merging text, video, and images, the book represents a social reading experience since users can share passages via email, Facebook, or Twitter.

In summary, rich media books are enhanced by multimedia, interactivity, and social features. The promise of rich media is an active, engaging, and public reading experience, thanks to intuitive – “natural” – forms of interaction, almost infinite paths to explore, and dynamic, high-res visual artifacts. While physical books appear in comparison obsolete and inexorably doomed, the process to develop rich media often fits the print workflow that designers are used to, which is therefore reinforced.

THE POVERTY OF RICH MEDIA

What has changed since Voyager’s Expanded Books on floppies? Not much. Ok, books are not isolated anymore, they’re part of a shared experience, but the idea of sociality they foster seems to be confined mostly within the narrow boundaries of dominant social media platforms. Social reading can be more than tweeting passages. The same Bob Stein of the Voyager Company later founded the Institute for the Future of the Book, which focuses, among other things, on social reading technologies. One of these is CommentPress, a plugin for Wordpress that allows multiple users to comment each paragraph, line, or word of a given text. Both the text and comments are not locked in the book, instead they can be extracted through copy-paste or RSS feeds. As seen above, Openbookmarks’ definition is a broad one. Here’s another example:

You’re reading a book on one device, but half-way through you switch to another ereader. Your position and bookmarks are automatically synchronised.

iBooks format does not fully allow this. Rich media often take advantage of the shared efforts to develop open standards for digital publishing without giving back. Even though the iBooks proprietary format is based on the EPUB standard, it can’t be read by other ebook readers. While iBooks format allows custom functionalities, it prevents users to leave the Apple’s ecosystem. This is how Ed Bott summarizes Apple’s strategy: “Enter a product category supporting a widely used standard, extend that standard with proprietary capabilities, and then use those differences to disadvantage competitors” (Bott 2012). Preservation is an issue as well: how do you deal with many competing standards? Looking back in history, not much from the era of multimedia CD-ROM has survived.

Both enhanced ebooks and books as apps undergo a quality check in order to appear on Apple’s or Google’s virtual shelves. What these companies mean by quality is not as straightforward as one may think. For instance, Seth Godin’s book was rejected by Apple because it included “multiple links to Amazon store” (Godin 2012). Geometric Porn, an app that shows “non-explicit description of sexual organs or activity” (“Geometric Porn” 2012) was rejected and suspended by both Apple and Google. These examples indicate that conflicts of interest and censorship not only concern interactive ebooks, but the impact on these is often greater. Users can still install an app or download an iBooks file from a source other than the Apple Store or Google Play, but it’s a clumsy, frustrating process.

Within the ideology of rich media, engagement through multimedia and interactivity is intrinsically valuable. Multi-touch gestures and transitions are portrayed as an unmediated, therefore deeper, mode of interaction with digital devices. The reality is different: according to Dragan Espenschied (2013), “Simple actions like searching, writing, editing, calculating, controlling became needlessly painful to execute [...].” The physical keyboard offers instead “the simplest two-level interface: Novice users can orient themselves visually, if they grow to use certain features more often or with more detail, they can use precise keyboard combinations and shortcuts to execute functions that are present in their minds rather than the computer screen.”

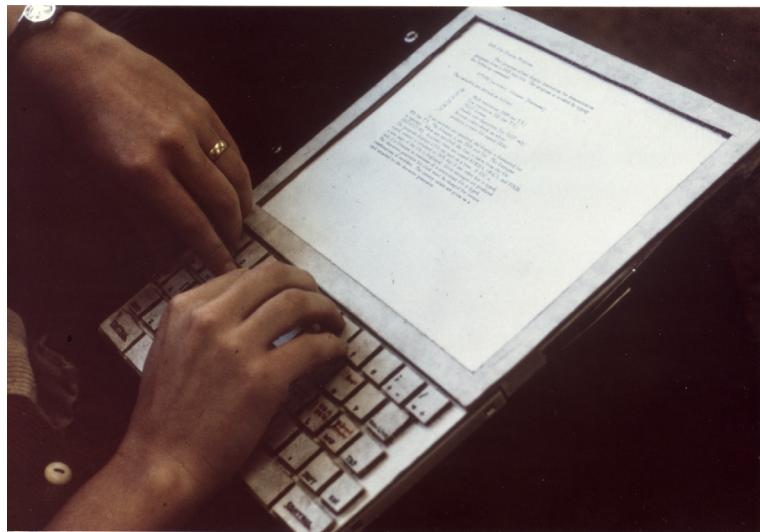


Fig. 11: Mockup of the Dynabook conceived by Xerox PARC's Alan Kay, 1970s.

Many people compared the iPad to the Dynabook, a device prototyped by Alan Kay ('magical paper', remember?) in 1972, which was not actually released because of the technological limitations of that time. Alan Kay (2013) himself did not approve such comparison, since the Dynabook was meant to be a device for intellectual production. The iPad, on the contrary, is consumption-oriented. No need to write code to realize this, structuring a short essay would be cumbersome enough.

'Rich media' is a marketing catchphrase. In the context of digital publishing, it is the idea of rich media itself that is sold. As in the *Computer Chronicles*, it is not multimedia content that counts, but its very presence, within a wider narrative in which slickness and high resolution correspond to technological progress. Likewise, interactivity is often there for its own sake, becoming free advertising for the device, reading software, and publishing ecosystem in general. "Widgets add Multi-Touch magic to books on iPad and Mac" ("iBooks Author" 2012). This is not the authentic magic Alan Kay was talking about; it's a mere bunch of tricks as boisterous as the early Web banner ads.

Some hesitations are emerging. "We pursued distractions and called them enhancements." This is how, in the New York Times, e-book designer Peter Mayers (2013) drily summarizes the recent history of multimedia digital publishing. Perhaps, instead of rich media I should speak of 'baroque media', media flaunting their opulence through ornamental user experience.

Softwares like iBooks Author and the Adobe DPS are easy to use: coding is not required and there's no need to change the way a designer works. “Building a book is as easy as dragging and dropping” (“iBooks Author” 2012). Even though users can create their own widgets, iBooks Author is focused on customization. The DPS is an integration of inDesign. Both are the result of a very specific idea of what publishing is and how it is performed. An idea developed with print in mind and with the hurry to reach or build a digital audience. While this software work probably well for high-volume publishing enterprises, these tools produce reactionary workflows and publications. Supposedly, rich media are not expensive in terms of time, money, and labor. This is true as long as the paradigms encoded in the software are accepted. Florian Cramer (2014) puts it this way: “[...] we're looking for pragmatic, working solutions – not snazzy design show-off work that may create wow-effects but will not be a workable model for real life [...] Focus on showcase projects has been the achilles heel of all electronic and multimedia publishing efforts ever since the CD-ROM in the 1990s.”

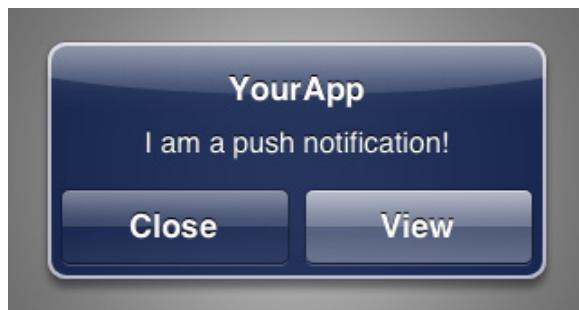


Fig. 12: An iOS push notification.

One of the fields where rich media are supposed to have a groundbreaking effect is education. The assumption is that ‘digital natives’ are completely at ease with digital technology, therefore learning tools and methods must adapt to this new kind of cognition. Traditional textbooks are static, boring and therefore obsolete. The argument is generally supported by the frequent statistics showing the extinction of strong readers. The solution is books in which students “flick through photo galleries, rotate 3D objects, tap to pop up sidebars, or play video and audio” (“iBooks Textbooks for iPad” 2012).

Italian philosopher Roberto Casati (2013) names this phenomenon “digital colonialism.” Sharing Kay's concerns, he highlights the way rich media discourage intellectual production. Furthermore, he argues that they impose a continuous and tiresome multitasking condition. Along with push notifications, a bestiary of other distractions inhabits the iPad's environment. According to some of the early e-lit proponents, hyperlink was to revolutionize literature. Today, the reassuring consequentiality and peaceful inactivity of traditional books seems to offer an escape from this hammering information overload.

Rich media reflect the privileges of rich countries. Several enhanced publications are developed without considering hardware and network conditions on a global scale. In 2012, among the first eight textbooks available through iBooks, the smallest was more than 700Mb big. Some of them were bigger than 2Gb (Brownlee 2012). Such files require lot of available space and a very fast connection.

'RICH MEDIA' IS WHAT INTERACTIVE MULTIMEDIA STANDS FOR

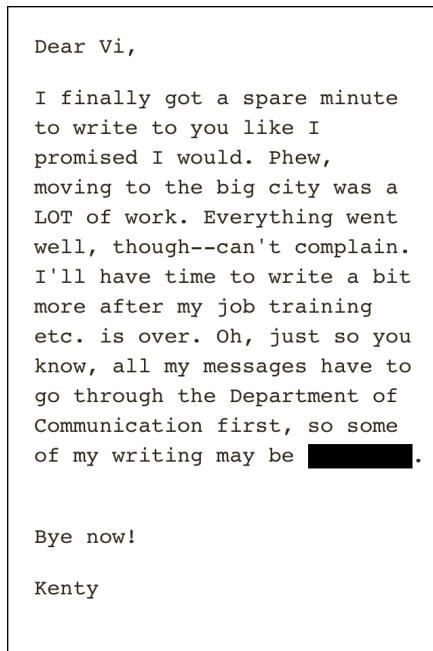


Fig. 13: A screenshot from Blackbar.

A necessary clarification: I'm not against multimedia or interactivity. After all, this transcript includes videos and links. There are several interactive publications that I like. Blackbar is my favorite one: a text-based dystopia where the reader needs to guess censored words in order to proceed. Blackbar was made in 2013, but it could have been created 30 years ago. Is this a book or a game? Who knows... By 'rich media' I don't simply mean interactive multimedia, but the blind business-minded enthusiasm towards these features. In many cases pushing interactive multimedia into ebooks only makes sense from the commercial point of view. The Web is a superb environment for multimedia and interactivity. Currently, browsers interpret HTML, CSS, and JavaScript way better than the render engines of ebook readers. But websites are not easy to sell. Lincoln Michel (2014) suggests a different territory: "Despite the regular hyping of enhanced e-books/hypertext/apps/interactive books, I don't see those going anywhere outside of a few specific markets like children's books and textbooks. The problem is that we already have a whole industry devoted to interactive narratives: video games." But publishers see themselves as book makers and when they publish enhanced book, they indirectly promote the reading device: would people be interested in the iPad if there weren't applications showing off its potential?

PART 2: POOR MEDIA

While rich media mostly emphasize the characteristics of the book as a technology to be used and consumed, poor media express and corroborate its potential of duplication and dissemination. Since the way in which information is structured may encourage or, conversely, inhibit duplication, poor media also include technologies of production.



Fig. 14: Luther Bible, 1545.

Like rich media, ‘poor media’ is a broad, multifaceted concept. Before outlining a definition, I’ll depict a few episodes in which digital publishing appears as a practice bolstered, stimulated, or activated by poor media. A consideration first: the whole history of the book, not just since the advent of digital networks, can be understood as the sacrifice of a certain idea of material quality in favor of a faster duplication or a broader reach. As Cory Doctorow (2004) puts it, “every successful new medium has traded off its artifact-ness – the degree to which it was populated by bespoke hunks of atoms, cleverly nailed together by master craftspeople – for ease of reproduction.” The Luther Bible was not as fancy as monks’ hand-illuminated bibles from the previous century, anti-soviet carbon-copied samizdat were fragile and vulnerable, mimeographed zines were mostly cheap and unruly.

PROJECT GUTENBERG

In 1971, during the night of the fourth of July, Michael S. Hart, at the time a Human-Machine Interfaces’ student at the University of Illinois, used the time available at the mainframe computer of his university (time that was worth millions of dollars) to retype and publicly distribute the text of the *United States Declaration of Independence*. At a time in which computers were mainly used for data processing, employing them for content distribution was not an obvious choice. In Hart’s (1992) words, “the greatest value created by computers would not be computing, but would be the storage, retrieval, and searching of what was stored in our libraries.”

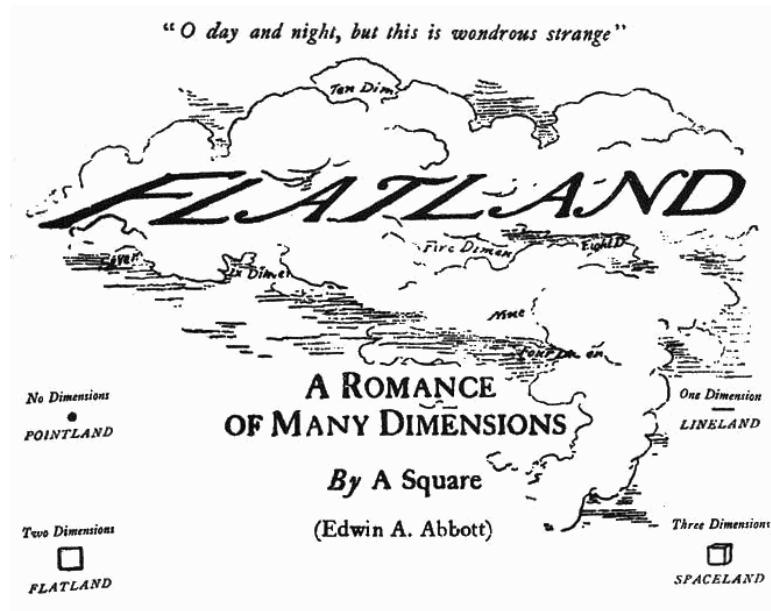
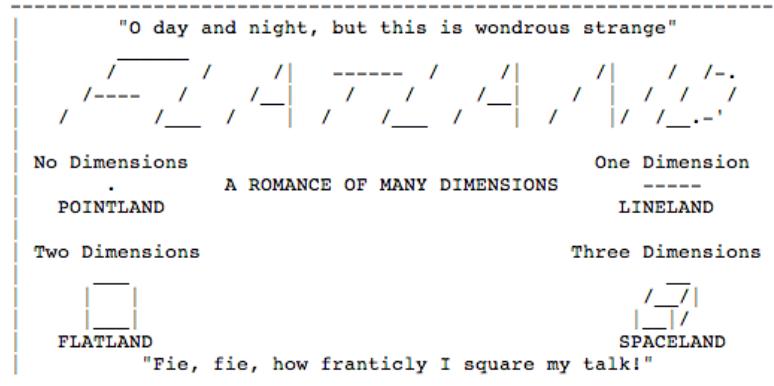


Fig. 15: Edwin Abbott Abbott, *Flatland: a Romance of Many Dimensions*, 1884. Frontispiece.

Michael Hart was profoundly conscious of the duplicating potential of computers, which he considered a form of “replicator technology.” This attitude, together with the adoption of “Plain Vanilla ASCII,” a universally interchangeable standard for text, led to the development of Project Gutenberg, a volunteer-based platform whose mission is to “encourage the creation and distribution of eBooks” (Hart 2004). All the books on Project Gutenberg are released in the public domain and freely available for download.

Flatland: A Romance of Many Dimensions
Edwin A. Abbott (1838–1926. English scholar, theologian, and writer.)



With Illustrations by the Author, A SQUARE (Edwin A. Abbott)

Fig. 16: *Flatland*'s frontispiece, plain text version converted in 2008.

Sometimes, the intrinsic limitations of plain text led to the development of interesting solutions in order to include illustrations and the paratextual elements of a publication. Consider this frontispiece of *Flatland*, made in 2008. Evidently, it is at the same time less *and* more than a neutral replica.

E-ZINES

Let's go back to *Computer Chronicles* for a moment. Jerod Pore, speaking of his *Factsheet Five* zine on The WELL, praises the instant availability offered by the internet; highlighting how inexpensive it is to produce and distribute a work both in terms of time and money. At the same time, he doesn't forget to remark that both electronic and print publishing don't come for free if we consider natural resources.

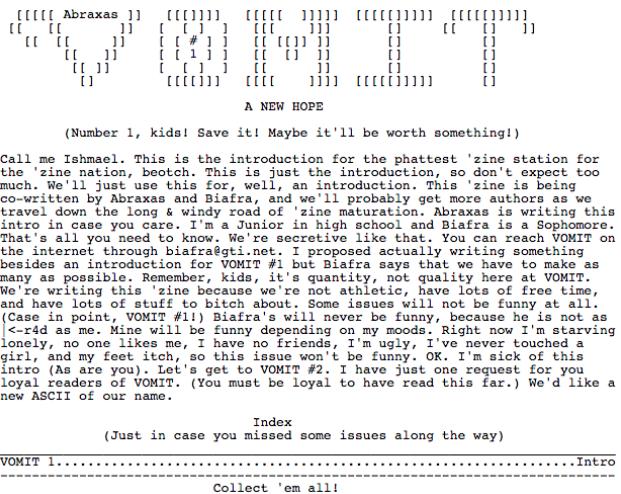


Fig: 17. *Vomit* e-zine.

Like the early Project Gutenberg ebooks, e-zines were originally formatted as ASCII text. At first, they were spread through the BBS (bulletin board system). According to Jason Scott (1999), archivist at textfiles.com, “Instead of losing individual textfiles in the sea of BBSes, many writers chose instead to move to the ‘Magazine’ model, where they would band together textfiles and release them as a group. This strengthened the chances of the files surviving and also made for impressive file sizes, a sign of quality to people browsing sites.”

BOOKWAREZ

Speaking of ebooks, Cory Doctorow (2004) indicates a phenomenon that goes under the name of ‘bookwarez’. From Doctorow’s point of view, an ebook is not necessarily a digital publication produced and distributed by a proper publishing house, but rather a “pirate” or unauthorized electronic edition of a book, usually made by cutting the binding off of a book and scanning it a page at a time, then running the resulting bitmaps through an optical character recognition app to convert them into ASCII text, to be cleaned up by hand. These books are pretty buggy, full of errors introduced by the OCR.”

MARKDOWN

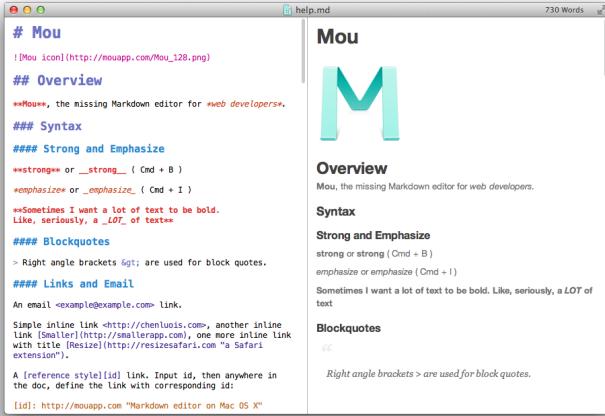


Fig. 18: Screenshot from Mou editor showing both Markdown source and the rendered HTML output.

Created by John Gruber in 2004, Markdown is a handy markup language that allows to create structured text easily convertible to HTML (but also EPUB, PDF, and more). Unlike HTML, Markdown is easily readable to the human eye: for instance, `italic` becomes `*italic*`. Unlike the .doc format, Markdown doesn't need a dedicated processor: one can write Markdown in TextEdit as well as in Gedit or in TextPad. “Markdown is a product of internet culture. It uses ad-hoc formatting signs commonly used in e-mail and chat platforms, and further popularized on blogging platforms [...]” (Digital Publishing Toolkit Collective 2014). Although limited and somehow strict, Markdown encourages duplication and multiple instantiation of a text in different formats. It also facilitates archiving since its semantic structure is manifest.

EPUB

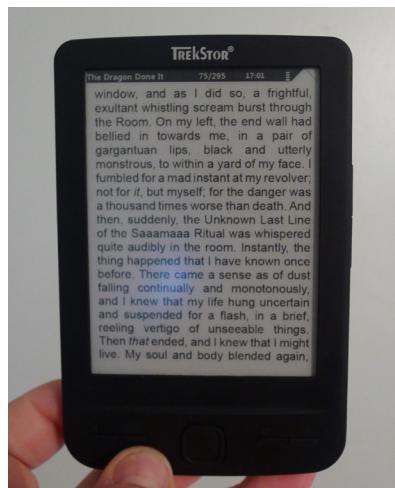


Fig. 19: TrekStor Pyrus Mini, the smallest E Ink reader available on the market.

Originally developed around 1998, EPUB (OEB at that time) is a free and open standard for digital books developed by the International Digital Publishing Forum (IDPF). EPUB 3, its latest release, may include audio, video, and interactive elements programmed in Javascript. Despite this, I consider it a poor medium. Here is why: “A key concept of EPUB is that content presentation should adapt to the User rather than the User having to adapt to a particular presentation of content” (International Digital Publishing Forum 2011). Instead of imposing its features, an EPUB file tries to do its best in each possible situation, from narrow E Ink readers to multi-touch tablets. Furthermore, its inner architecture is crystal clear and easily accessible. An EPUB book is basically a portable website: a compressed series of HTML and CSS files together with metadata and structure.

PDF



Fig. 20: *Transaction Record* by Michael Nardone, 2014. Published by Gauss PDF as a PDF file.

The PDF format was created by Adobe more than 20 years ago on the basis of PostScript – a language that deeply contributed to the birth of Desktop Publishing – and later released as an open standard. Pretty much every word processor can export PDFs. This format is used for extremely diverse kinds of documents, from books to tax receipts. Although it is possible to include interactive elements and videos in a PDF, here I refer to its quintessential form: “an airline boarding pass, printed out or held open on a smartphone, or else it is the manual that explains the smartphone itself, or else the quarterly statements the smartphone corporation publishes for investors” (Gitelman 2014). While PDFs were originally meant for print, today’s browsers seamlessly render them. As Alessandro Ludovico (2014) points out, the PDF can be seen as a sort of sub-medium, since it evolved from a production standard to a standalone one.

PRINT ON DEMAND

Print on Demand (POD) is a system that allows even just a single copy of a book to be printed and made commercially available without any prior investment. Is this digital publishing? I'd like to think so. POD books represent a genuine hybrid of digital and analog processes: sent through the regular postal system, the physical book is the tip of the iceberg of an infrastructure that takes advantage of digital printing, desktop publishing, the PDF format, and Web 2.0. Moreover, as N. Katherine Hayles (2007) reminds us, "Digital technologies are now so thoroughly integrated with commercial printing processes that print is more properly considered a particular output form of electronic text than an entirely separate medium."

From a graphic designer's perspective, POD is very limiting: the choice is often among a couple of different papers and a standardized series of formats. When the amount of ordered book is small, black and white printing is the only convenient one. However, POD books are quickly produced and distributed: I upload the PDF, I get an ISBN, and my book is ready to be purchased (or downloaded). Immediately after, I can revise it as many times as I wish. The version triumphs over the edition. No intermediaries needed, apart from the POD platform I've chosen.

Poor media foster duplication and boost circulation. They are lightweight. Poor media suggest an active use: frequently they can be converted, dissected, remixed, reorganized, updated. The modest simplicity of poor media doesn't contradict the possibility to preserve them. The duplicating aura they carry amplifies their resilience: "lots of copies keep stuff safe," archivists say. The poverty of poor media should be better called *frugality*, since it's characterized by the conscious, serene renunciation of embellishments in favor of accessibility and spread. The spartan look of poor media might not be beautiful, but it's undoubtedly charming.

[A final remark: most of the ideas expressed in this text emerged from the memorable two years-long collaboration with the Digital Publishing Toolkit Consortium and from fervent conversations with great people such as André Castro, Loraine Furter, and the members of OSP and Constant. I take this chance to thank them all.]

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